

#### **ENVIRONMENTAL LABORATORY**

1609 Western Avenue

P.O. Box 12435

BOBMQ9-ORK-003 2

0046230

(414) 498-2222 (800) 236-4067 FAX (414) 498-4067

Green Bay, WI 54307-2435

June 24, 1994

Westinghouse Hanford Co Clay Smith Richland Field Office 345 Hills Street Richland, WA 99352

Dear Mr. Smith:

Subject: Samples received May 18, 1994

Batch No. 9405181 Sample Nos AA04453-AA04455; AA04098-

AA04105

Enclosed you will find a report of analytical results for sample Nos. AA04453-AA04455; AA04098-AA04105. The samples were analyzed in accordance to the Chain of Custody form contained herewith. We did not experience any difficulties with the analysis. The QC is also enclosed in the data package.

Should you have any questions regarding this report, please feel free to call me at 1-800-236-4067. Please have both reference numbers listed above available when making inquiries regarding this report. Thank you.

Sincerely,

Mary Jo Doxtator-Nash

Federal Projects

Approval

Rick Everson

Laboratory Manager

Enclosure

cc: File



# OFFICE OF SAMPLE MANAGEMENT RECORD OF DISPOSITION

ROD-94-0125
Record of Disposition No.

DATE: 5/20/94	LABORATORY: ORTEK
PROJECT TITLE/NO.: 100-FR-3/94-087	NCR NO.: 051974
SAMPLE IDENTIFICATION NUMBERS:	
вовмха, вовмхэ	
DESCRIPTION OF EVENT:	·
The Chain-of-Custody stated sample identificate BOBMX9. The Chain-of-Custody was broken.	ion number as BOBMX8. The sample bottle was labeled
DISPOSITION OF SAMPLES:	
With concurrence from J.M. Ayres, cognizant e	engineer, cancel the analysis for BOBMX9.
APPROVAL SIGNATURES:	
R. C. Smith/ R Clay to Smith	3/20/94
OSM Project Coordinator (Print/Sign Name)	3-/20/44 Date
J. M. Ayres/	7/25/74
Technical Representative (Print/sign Name)	Date
N/A	
Quality Assurance (Print/Sign Name)	Date

	<del>- 1/1051/1605</del>					
Westinghouse Hanford Company			IANCE REP	ORT	1. Page/_ of/	2. Preprinted No. 05197 QA Log No. E&A-94-037
3. P. O., W. O., or Job	4. System/End Use		5. Item/Materia	ıl	6. Dwg.,/Spec./	1
Control No.	RI /FS		SAMPL		BOBMX8,	BOGNX9 N
8. Program/Project/Other /6	0-ER-3 /94-	087		9. Safety Class	10. ASME Code	Items Yes No
•				N/A		horized inspector)
11. Supplier Name/Address					12. Notification	of Potential Occurence Requ
ENYIRONMENTAL	FIELD SAMIFE		) # RY ( C S S			] Yes ⊠ No
13. Code: Lot/Heat/Serial	14. Lot Size	15. Sa	mpie .	16. Qty. Acc.	17. Inspection C	_
//-	,		,	X		Spec. Insp. Plan
NA	/		/	P	Other W	HC-CM-7-7 EII
18. Item 19. Description of	f Nonconformance (list ser	rial no. w	here applicable)	22. D		ation, and Instructions
7.5-5-5-5-5					<u> </u>	
j'	DIN WHC-CM		-	Reject	:- Kef	200~ CC
REV.4; SE	-C.6-2, THE	CAFI	1-0F-			
CUSTODY	AND SAMPLE A	MALYS	S REQUEST	-K00-9	74-0125	which state
SHOULD BE	COMPLETED COA	RECT	LY AND		1	sis_was
ACCOMPANY	THE SAMPLES				ne_a~alu	) six_war
				-carcelle	)	
CONTRARY	70 THE AS	ر غیرہ	THE	carce ive	.0.,	
SAMIPLE N	UNBER ON TH	t_E_ C	44W-0F.			
CUSTO DY	(BOB MX8)	410	0.T			
<u> </u>	HE SAMPLE					
l i	BOTTLE (BOB)					
CHAIN-OF-	CUSTODY WAS		KEN.			
20. Originator's Signature	1 a EMITH	Da	te 23 De	sign Document Ch	ange Required?	
	,					<b>X</b>
RClayte for	1	5/2	0/94 [	Yes, Doc. No		
21. Cognizant QA Manager's	Signature	Da	,   _	Yes, No	Spening (Spening )	\ <b>X</b> :
DD VÜLKILIHA 25. Cognizant Engineer A	De Krus Date	5/2	4/74	Date	Signature/Org.	Da
JNI A YRES a		. recnn	A	٨	olyllature/org.	1 \
QA Engineer	Date	Signat	ure/Org.	Date	Signature/Org.	N De
27. Accept Reject	t Follow on NC		Λ/A	4	1-1-16	Min (-5
Accept Reject	Follow on NC	ж <u></u>	, - 1 ]	QA/C P	ersonnel	, c

P.O. Box 12435

(414) 498-2222 (800) 236-4067 FAX (414) 498-4067 Green Bay, WI 54307-2435

\*\* Certified for Environmental Analytical Services by Wisconsin DNR Laboratory Certification No. 405099530 \*\*

# Sample Analysis Report

To: US DEPARTMENT OF ENERGY C/O WESTINGHOUSE HANFORD

COMPANY

2355 STEVENS DR RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388

Client Fax:

Batch #: 9405181

LIMS #: AA04453

Sample ID: BOBMQ9 Sample Matrix: GROUNDWATER

Date Received: 05/18/94 Date Reported: 06/23/94

Project ID: 100-FR-3

#### Collection Information

Date-Time-By: 05/06/94 - 10:45 -

Location:					Analysis/	Analyst/
			MDL/		Extraction	Supervisor
Test/Parameter	Method	Result	PQL	Units	Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.0	1.0	UG/L	06/03/94	SAD

-Rick Everson Lab Director



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To: US DEPARTMENT OF ENERGY

C/O WESTINGHOUSE HANFORD

COMPANY

2355 STEVENS DR RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388

Client Fax:

Batch #: 9405181

LIMS #: AA04454

Sample ID: BOBMY7

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

#### **Collection Information**

Date-Time-By: 05/06/94 - 10:45 -

Location:					Analysis/	Analyst/
			MDL/		Extraction	Supervisor
Test/Parameter	Method	Result	PQL	Units	Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.6	1.0	UG/L	06/03/94	SAD

Signed

Lab Director -Rick Everson



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To: US DEPARTMENT OF ENERGY

C/O WESTINGHOUSE HANFORD

COMPANY

2355 STEVENS DR

RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388

Client Fax:

Batch #: 9405181

LIMS #: AA04455 Sample ID: BOBMT7

Sample Matrix: GROUNDWATER

Date Received: 05/18/94
Date Reported: 06/23/94

Project ID: 100-FR-3

#### **Collection Information**

Date-Time-By: 05/09/94 - 13:15 -

Analysis/ Analyst/ Location: MDL/ Extraction Supervisor Test/Parameter Method Result POL Units Date Approval ORGANICS SUPERVISOR APPROVAL **COMPLETE** RTE 06/22/94 HYDRAZINE **ASTM D1385** 1.0 UG/L 06/03/94 SAD

Signed

Lab Director -Rick Everson

Date 6/34/94



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# Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD

COMPANY

2355 STEVENS DR RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388

Client Fax:

Batch #: 9405181 LIMS #: AA04097

Sample ID: BOBMV5

Sample Matrix: GROUNDWATER

Date Received: 05/18/94
Date Reported: 06/23/94

Project ID: 100-FR-3

#### Collection Information

Date-Time-By: 05/10/94 - 11:06

Analysis/ Analyst/ Location: MDL/ Extraction Supervisor PQL Date **Approval** Test/Parameter Method Result Units COMPLETE 06/22/94 RTE ORGANICS SUPERVISOR APPROVAL **HYDRAZINE ASTM D1385** 1.0 UG/L 06/03/94 SAD

Signed K. SYLISON

-Rick Everson

Lab Director

Date 6/24/94

Printed on Recycled Paper

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Green Bay, WI 54307-2435

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# Sample Analysis Report

To: US DEPARTMENT OF ENERGY

C/O WESTINGHOUSE HANFORD

COMPANY

2355 STEVENS DR RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388

Client Fax:

Batch #: 9405181

LIMS #: AA04098

Sample ID: BOBMW7

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

#### Collection Information

Date-Time-By: 05/09/94 - 09:40 -

Location:					Analysis/	Analyst/
			MDL/		Extraction	Supervisor
Test/Parameter	Method	Result	PQL	Units	Date	Approval
					06.00.04	DOTT
ORGANICS SUPERVISOR APPROVAL HYDRAZINE	ASTM D1385	COMPLETE 1.0	1.0	UG/L	06/22/94 06/03/94	RTE SAD

Signed

Lab Director -Rick Everson

Date 68494



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Green Bay, WI 54307-2435

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# Sample Analysis Report

To: US DEPARTMENT OF ENERGY

C/O WESTINGHOUSE HANFORD

COMPANY

2355 STEVENS DR RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388

Client Fax:

Batch #: 9405181

LIMS #: AA04099

Sample ID: BOBMS5

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

#### Collection Information

Date-Time-By: 05/10/94 - 10:00 -

Location:					Analysis/	Analyst/
•			MDL/		Extraction	Supervisor
Test/Parameter	Method	Result	PQL	Units	Date	Approval
ORGANICS SUPERVISOR APPROVAL HYDRAZINE	ASTM D1385	COMPLETE 1.0	1.0	UG/L	06/22/94 06/03/94	RTE SAD
HIDRALINE	V3 IM D 1303	1.0	1.0	OG/L	00/03/34	SAD

Signed

Lab Director -Rick Everson

Date 684/94



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To: US DEPARTMENT OF ENERGY

C/O WESTINGHOUSE HANFORD

COMPANY

2355 STEVENS DR RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388

Client Fax:

Batch #: 9405181

LIMS #: AA04100

Sample ID: BOBMS9

Sample Matrix: GROUNDWATER

Date Received: 05/18/94 Date Reported: 06/23/94

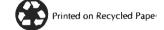
Project ID: 100-FR-3

#### Collection Information

Date-Time-Bv: 05/10/94 - 12:00

Location:					Analysis/	Analyst/
			MDL/		Extraction	Supervisor
Test/Parameter	Method	Result	PQL	Units	Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	3.2	1.0	UG/L	06/03/94	SAD

Lab Director -Rick Everson



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# Sample Analysis Report

To: US DEPARTMENT OF ENERGY

C/O WESTINGHOUSE HANFORD

COMPANY

2355 STEVENS DR RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388

Client Fax:

Batch #: 9405181

LIMS #: AA04101

Sample ID: BOBMR3

Sample Matrix: GROUNDWATER

Date Received: 05/18/94 Date Reported: 06/23/94

Project ID: 100-FR-3

#### Collection Information

Date-Time-By: 05/11/94 - 13:30 -

Location:					Analysis/	Analyst/
			MDL/		Extraction	Supervisor
Test/Parameter	Method	Result	PQL	Units	Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.0	1.0	UG/L	06/03/94	SAD

Signed

Lab Director -Rick Everson



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To: US DEPARTMENT OF ENERGY C/O WESTINGHOUSE HANFORD

COMPANY

2355 STEVENS DR RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388 Client Fax:

Batch #: 9405181

LIMS #: AA04102

Sample ID: BOBMR7

Sample Matrix: GROUNDWATER

Date Received: 05/18/94 Date Reported: 06/23/94

Project ID: 100-FR-3

#### Collection Information

Date-Time-By: 05/11/94 - 11:50

Location:					Analysis/	Analyst/
			MDL/		Extraction	Supervisor
Test/Parameter	Method	Result	PQL	Units	Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.6	1.0	UG/L	06/03/94	SAD

Lab Director -Rick Everson



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# Sample Analysis Report

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COMPANY

2355 STEVENS DR RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388

Client Fax:

Batch #: 9405181

LIMS #: AA04103

Sample ID: BOBMS1

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

#### Collection Information

Date-Time-By: 05/11/94 - 09:30 -

Location:					Analysis/	Analyst/
			MDL/		Extraction	Supervisor
Test/Parameter	Method	Result	PQL	Units	Date	Approval
ORGANICS SUPERVISOR APPROVAL HYDRAZINE	ASTM D1385	COMPLETE 2.0	1.0	UG/L	06/22/94 06/03/94	RTE SAD

Signed

Lab Director -Rick Everson



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# Sample Analysis Report

To: US DEPARTMENT OF ENERGY

C/O WESTINGHOUSE HANFORD

COMPANY

2355 STEVENS DR

RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388

Client Fax:

Batch #: 9405181

LIMS #: AA04104

HIMS W. AROTIO

Sample ID: BOBMV1

Sample Matrix: GROUNDWATER

Date Received: 05/18/94
Date Reported: 06/23/94

Project ID: 100-FR-3

#### Collection Information

Date-Time-By: 05/12/94 - 11:30 -

Location:					Analysis/	Analyst/
			MDL/		Extraction	Supervisor
Test/Parameter	Method	Result	PQL	Units	Date	Approval
ORGANICS SUPERVISOR APPROVAL HYDRAZINE	ASTM D1385	COMPLETE 2.1	1.0	UG/L	06/22/94 06/03/94	RTE SAD

Signed

Lab Director -Rick Everson



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### Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD

COMPANY

2355 STEVENS DR RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388

Client Fax:

Batch #: 9405181

LIMS #: AA04105

Sample ID: BOBMT3

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/24/94

Project ID: 100-FR-3

#### **Collection Information**

Date-Time-By: 05/12/94 - 09:30 -

Location:					Analysis/	Analyst/
			MDL/		Extraction	Supervisor
Test/Parameter	Method	Result	PQL	Units	Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/23/94	RTE
HYDRAZINE	ASTM D1385	3.2	1.0	UG/L	06/03/94	SAD

Signed K. SEIFEROX

Lab Director -Rick Everson

Coc # 406662 Dag Westinghouse Hanford CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST Company Data Turnaround Priorty Collector Company Contact Telephone No. X Normal K.D. Co 509-376-4388 PH BUTCHER Sampling Location SAF No. Project Designation 94-087 100-FR-3 Method of Shipment Ice Chest No. Field Logbook No. EMERY Bill of Lading/Air Bill No. Offsite Property No. Shipped To 140213 7748 W44-0-0594-1 ORTEK Possible Sample Hazards/Remarks Preservative HClpH<2 Type of Container Gs No. of Container(s) Special Handling and/or Storage Volume COOL TO 4 DEGREES CENTIGRADE 0.9°C recid 40ml HYDRA-ZINE AMPLE ANALYSIS Time Sampled Control of the Contro Matrix\* **Date Sampled** Sample No. 05/06/94 BOBMQ9 1045 freg 4V Date due 6/15/94 Scan for radioactivity - OK Matrix\* CHAIN OF POSSESSION Sign/Print Names = Soil Date/Time Relinquished By = Sediment = Solid Kirty Ohan K DLes 5/6/94 1310 = Sludge Date/Time 5/9/9 4 Relinquished By = Water = Oil = Drum Solida Relinguished By = Drum Liquids = Tissue = Wipe = Liquid Vegetation = Other LABORATORY Received By

FINAL SAMPLE

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Westinghouse Hant Company	ford	C	HAIN O	F CU	STOI	OY/S	AMP	LE AI	VALY	'SIS I	REQU	IEST			Data Tu	1 Imaround		
Collector K.D.Cu			Company Cont	tact					_,,	Telepho						X Norma		
Project Designation			PH BUTCHER Sampling Loca	tion 19	19-F5	5-6				SAF No.					.1			
lae Chest No. EL-21	•		Field Logbook	No.	19-FS	1055			· · · · · · ·		of Shipm	ent						
Shipped To DRTEK			Offsite Propert	y No.	N94.	-0-0	594.	-1		Bill of La	ding/Air I	Bill No.	774	8				
Possible Sample Hazards/Remai	rks		Preservative	HClpH<2														S
			Type of Container	Gs			ļ			<u> </u>								
Special Handling and/or Storage	9 4		Container(s)	1_1_	ļ			ļ		<u> </u>			ļ					
COOL TO 4 DEGREES CENTIG	RADE O:	t lab	Volume	40ml HYDRA- ZINE										<u> </u>				
AA&4095 A	AWYU	alysis H										<u> </u>						
Sample No.	Matrix*	Date Sampled	Time Sampled															
BOBMYT	<u> </u>	05/06/94	1045	X														
CHAIN OF POSSESSION		Sign	/Print Names		<u> </u>	<u></u>	SPECIA	L INSTRU	CTIONS		<u> </u>		<u> </u>	115	1911		Matrix *	•
Relinquished By  Modern Lee Kin Cee  Relinquished By  Relinquished By	Date/Tin  5 (4   5 = 4    Date/Tin  Date/Tin	Received Received Received	Ney Long By J	20, ry	Date/Tir  Date/Tir	4 3/5 <sup>-</sup> The	1	ef in t		Radi				6/15	174	S SEO SL WO A DDL T WILL		s Solide Liquids
Relinquished By	Date/(In	Hecelved	·		Date/III	110		·						Dete/Tie		×	= Veget = Other	tation
LABORATORY SECTION Storia	7.	to	Samp	le Re	ceiving	v9							6/	Date/Tin 18/94	1230	····		
FINAL SAMPLE Disposal Meti	hod					0	Dispos	ed By						Date/Tin	10			

17

DISTRIBUTION: Original- Sample Yellow - Sampler

						,								a	76 # 4c	Solob)	. (	126ch 140518
Westinghouse Hant Company	ford		CHAIN O	F CU	STOI	OY/S	AMPI	LE AI	VALY	'SIS I	REQL	JEST			Data T	1 umaround	1	
Collector (			Company Cont	act	·.					Telepho						Priort		
Project Designation			PH BUTCHER Sampling Loca	tion						509-37 SAF No						X 1401111		
100-FR-3			00	t						94-087								
Ice Chest No. EN-21			Field Logbook	No.						Method	of Shipm	ent						
Shipped To			Offsite Propert	YN91 -	2-01	5011	-1			Bill of L	ading/Air 2137	91/Y°C/						
ORTEK Possible Sample Hazards/Remar	ks		Preservative	1-14 (		1	T'	1	Ţ	140	01-71	19 2	T	T	T			
		**	Type of	HClpH<	2	ļ	-		ļ			<del> </del>		ļ				No.
			Container	Gs														7,00,017,000
			No. of Container(s)	1														G.
Special Handling and/or Storage	1 //	00.	Volume	1			1											the land of
COOL TO 4 DEGREES CENTIGE	RADE ()	TE MOR		40ml HYDRA-				<del> </del>				-		-	<del> </del>		<del>                                     </del>	3855455189
	O.	ic xio		ZINE				1	1								'	
104096	AMPLE AND	alysis D4455					i											e entre de la constitución de la
Sample No.	Matrix*	Date Sampled	Time Sampled															
BOBMTT	W	3/9/90	1315	X														
CHAIN OF POSSESSION		Sk	n/Print Names				SPECIA	L JINSTRU	CTIONS		<u> </u>			, ,	/		Matrix	
Relinquished By  North Trap  Relinquished By  Relinquished By  Relinquished By	p 5/9/ Date/Tir	me (U3C) Receive  A Pull  Receive  A Pull  Receive  A Pull  Receive	eney Creed By	eney E	Date/Tir	1430 me	9	rej4		Do		du			94 -	SESO SL WOASDL TWIL X	= Soil = Sedir = Solid = Sludg = Wate = Oil = Air = Drum = Tissu = Uipuk	ment ge or n Solida n Liquida je je d
LABORATORY SECTION SINCE	Dorta	tr	Sample	Recei	ur g		Dispos	sed By					5/	Date/Tir 18/94 Date/Tir	1230			
DISTRIBUTION: Original- Samp		v - Sampler														BC-6	5000-828	(12/92)

Westinghouse Hanford	d	C	HAIN O	F CU	STOI	Y/S	АМРІ	E Al	NALY	'SIS I	REQU	EST		C		umaround		Date 140519
Collector P - 114			Company Cont	act				· · · · · · · · · · · · · · · · · · ·		Telepho	ne No.					Priort		
B. 7. W 4 1777	Ept .		PH BUTCHER							509-37	6-4388					X Norm	al ————	
Project Designation 100-FR-3			Sampling Local	tion /	99-F	-7-1	,			SAF No. 94-087								
ice Chest No. E2-21			Field Logbook	No. Fz	FL-					Method	of Shipm							
Shipped To			Offsite Propert	y No.	00 -	0-00	594	- (		Bill of L	eding/Air i	Bill No.	4021	377	48			
ORTEK Possible Sample Hazards/Remarks			Preservative	HCLpH<2			1 7											benge
			Type of Container	Gs														
			No. of Container(s)	1					l "									Ç
Special Handling and/or Storage COOL TO 4 DEGREES CENTIGRADE	0.	9° revd	Volume	40mt											ŀ			ė
SAM AAJ4097	PLE ANAI			ZINE														, "gus " " " .000
Sample No.	Aatrix *	Date Sampled	Time Sampled															
808mv5	W .	05/10/94	1106	×														
CHAIN OF POSSESSION		Sign	/Print Names				SPECIAI	. INSTRU	CTIONS		$\bigcap_{-}$	/	1.0	1.119	=/G/		Matrix	•
Halingulehod By  K. Mars K. Trap 5/4  Relingulation By  Mules of the Superior	Date/Time	Received	ency I Swe		Date/Tir Date/Tir Date/Tir Date/Tir	(727 ne (440 4	, 8c	an f	ou s	V	va o act	ivity	ue 2-0	K	5194		= Soli = Sediri = Solid = Slud = Vate = Oil = Air = Drum = Drum = Tissu = Wipe = Liquk = Vege = Other	ge or o Solids o Liquids ie d d tation
LABORATORY SECTION Storia d	ABONATORY A CONTRACTORY							ed By					5/,	Date/Tir 18/94 Date/Tir	1230			

DISTRIBUTION: Original- Sample Yellow - Sampler

Westinghouse Han Company		(	CHAIN O	F CU	STO	DY/S	AMPI	E Al	VALY	'SIS I	REQU	EST			Data To	1 urnaround		
Collector   IAph			Company Cont PH BUTCHER	tact						Telepho 509-37						X Norm		
refeet beergraner			Sampling Loca	ıtion					······································	SAF No							<del></del>	
100-FR-3 Ice Chest No			Field Laghack					<del></del>		94-087	of Shipme	nt.						
E1C- 21			Field Logbook	254						EMERY								
Shipped To DRTEK			Offsite Propert	ty No.	J94 -	0-	0.590	1-1		Bill of L	iding/Air B	iii No.	wa4	1-0	-05	594-	-1	
Possible Sample Hazards/Rema	rks		Preservative															_
			Type of	HCLpH<2			<del> </del>											14.
			Container	Gs		ļ			<u> </u>	ļ								es
			No. of Container(s)	1_1_						<u> </u>								- <del>- (</del>
Special Handling and/or Storag COOL TO 4 DEGREES CENTIG	DANE (	1.90e sould	Volume	40ml														*- \$
OUL TO 4 DEGREES CENTED	KADE -	1.9°e recid	,	HYDRA-						<del> </del>								785
		acrio		ZINE		ł												į
:	SAMPLE ANA	LYSIS													İ			Ē
AAD4098										i i								
Sample No.	Matrix*	Date Sampled	Time Sampled				1			1								
	1		1				T			T								
BOBMWT	W			X	ļ		<b></b>			ļ								
			<u> </u>	1														
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	1 1						1											
				-			<del> </del>			<del> </del>								
CHAIN OF POSSESSION	<u> </u>	Sig	n/Print Names		<u> </u>		SPECIA	ANSTRU	CTIONS	$\sim$	\ /			1.00/0			Matrix*	,
Relinquished By	Date/Ţim	e 1490 Received	Ву		Date/Tin	ne	1 1	ed	4V	L	)ate	de	ie 6	1519	'4	s	= Soil	
Relinquished By  1. Uhan / K. Urg  Religquished By	00 5/91	94 /Su	ELNEY LSW2 By	oner .	=/a/90	1420	'	$\mathcal{I}$	•				·			SE SO	= Sedim = Solid	
Religquished By	Date/Tim	e Received	By (	<del>UP</del>	Date/Tin	no	1 ,	U				4		,		SL W	= Sludge = Water	
Diccona LSween	5/17/5	/					1 800		lor	rac	tio a	ctiv	ity-	OK		OA	= Oil = Air	
Relinquished By	Date/Tim	e Received	Ву		Dete/Tin	ne			) '				0			D8 DL	<ul><li>Drum</li><li>Drum</li></ul>	Bolic
·		1					1									T WI	= Tissue = Wips	
Relinquished By	Date/Tim	e Received	Ву		Date/Tin	ne	1									ľ	= Liquid = Veget	
																×	= Other	
LABORATORY Received By	.n ·		7 Title	· · · · ·			•						-1 1	Date/Tim				
SECTION Slovia	Dotta	In	Sample	ecein	76								5/18/9	4 12	30			
							Dispos								0			

BC-6000-828 (12/92)

DISTRIBUTION: Original- Sample Yellow - Sampler

Westinghouse Hanfo	ord		CHAIN O	F CU	STO	DY/S	AMP	LE AI	VALY	/SIS	REQU	JEST			Page Data To	1 umaround		<u>9</u> 40=
Collector K Trapo			Company Cont	act						Telepho						X Norm		
Project Designation			PH BUTCHER Sampling Loca	tion						SAF No	<u>6-4388</u>							
100-FR-3			Field leabark	NI-						94-087	of Shipm							
ce Chest No. EL-2			Field Logbook	054						EMERY	or Snipm	ent	_					
Shipped To			Offsite Propert	y No. A	321719	14 IA	194 -	-0590	1-1	Bill of L	.ading/Air	Bill No.	1402	137	148			
ORTEK Possible Sample Hazards/Remarks			Preservative	HCLpH<2														
			Type of Container No. of	Gs			ļ		1	-			ļ		<u> </u>			2009
			Container(s)	1_1_								<u> </u>						(d
Special Handling and/or Storage COOL TO 4 DEGREES CENTIGRA	DE O.	9°C rec'a	dat Volume	40ml HYDRA- ZINE						-	-	_	-		-			-X6990
AAU4099	MPLE ANA																	7.000 6.000 7.000 7.000 7.000 7.000
Sample No.	Matrix*	Date Samp	led Time Sampled							.,			,					
BOBMSS	<u>u</u>	5/10/94	1000	X		<u> </u>												
CHAIN OF POSSESSION			Sign/Print Names	<u> </u>			SPECIA	L INSTRIP	CTIONS			40		1050	1,5/90	I	Matrix*	
Relinquished By  K. J. Mall K. Trapp  Relinquished By  Kelinquished By  Relinquished By	Date/Tin  5/6/A  Date/Tin  Date/Tin	7/94	ceived By  ceived By  ceived By	reney s	Date/Ti	me	Sci	/	J 4 or,	radi					1,5/9	SE SO SL W O A DS DL	= Soll = Sedim = Solid = Sludge = Water = Oil = Air = Drum = Drum	Solids
Relinquished By	Date/Tin	ne Red	ceived By		Date/Ti	me										X V V	= Tissue = Wipe = Liquid = Veget = Other	'
LABORATORY Repeived By SECTION Usua	losta	ta,	Samo	ele Be	cein	n 9,							5/18/	Date/Ti	me /230			

BC-6000-828 (12/92)

DISTRIBUTION: Original- Sample Yellow - Sampler

														(	*00°	4006	المح وا	72tc 14051
Westinghouse Hanf Company	ord		CHAIN O	F CU	STOD	Y/S	AMP	LE AI	NALY	SIS I	REQL	JEST			Page	1 umaroun	_ of'	
Collector			Company Con	tact						Telepho	ne No.				-	Prior		
Project Designation			PH BUTCHER							509-37	6-4388					X Nom		
100-FR-3			Sampling Local	ition						SAF No. 94-087								
Ice Cheet No. TN - 21			Field Logbook	054						Method EMERY	of Shipm							
Shipped To ORTEK			Offsite Propert	ty No. 594-1	140	213	3774	18 A	os strta	Bill of L	ading/Air	Bill No.	140	213	770	48		
Possible Sample Hazards/Remark	(8		Preservative	HClpH<2														14. 22.
			Type of Container	Gs				ŀ						1	1			Vignanderal.
			No. of Container(s)	1														2505500
Special Handling and/or Storage COOL TO 4 DEGREES CENTIGE	ADE O.	9°C recid	Volume	40ml														8
	000			HYDRA- ZINE														
S DAO4100	AMPLE ANA	ALYSIS																
Sample No.	Matrix*	Date Sampled	Time Sampled															
BOBM59	¥	5/10/94	1200	X														
CHAIN OF POSSESSION		s	gn/Print Names	1			SPECIA	L JINSTRU	CTIONS						/		Metrix	
Relinquished By  1. May 14. Vap p  Relinquished By	Date/Tin  S/(0)  Date/Tin  Date/Tin	ne (4 (6) Receive	ed By  Clency Su  od By	væney	Date/Time Date/Time		sca	n g	14V ) fier,	rad	) Ac uo ac	e di tivi	ty-	Ed 15 ok	[19J	T WI L V	= Drum = Tissu = Wipe = Liquk = Vege	solids Liquids e
LABORATORY SECTION SOLUTION DISPOSAL MATERIAL SAMPLE		itu	Sample		uing.		Dispos	ed By			······································		5/18	Date/Tir Date/Tir	1230	×	= Other	

BC-6000-828 (1 2/92)

DISTRIBUTION: Original- Sample Yellow - Sampler

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Westinghouse Hant Company	ford		CHAIN O	F CU	STO	DY/S	AMP	LE AI	NALY	/SIS	REQU	JEST			Page	umeroun	of1	
Collector to T.			Company Con	tact						Telepho	ne No.				-	Priori		1
Collector K. TIAPP Project Designation			PH BUTCHER Sampling Loca	ntio a						509-37 SAF No				<u> </u>	_1	[X] Nom		
100-FR-3			1/1/0	F						94-087								
Ice Chest No. 52-21			Field Logbook	No (1)5(							of Shipm	ent						
Shipped To			Offsite Proper			-0 -	059	1-1		Bill of L	ading/Air	Bill No.	1/10	717	774	18	<del></del> -	
ORTEK Possible Sample Hazards/Remar	ks			1	1		T 7	7 1	Τ		1	Т	140	41-	1/4	70		
			Preservative	HCLpH<	2		<u> </u>							ļ	ļ	ļ		Lamy fresh
			Type of Container	Gs			ı				1	ľ	1		1			HAM MAY
			No. of Container(s)	1														
Special Handling and/or Storage COOL TO 4 DEGREES CENTIGE	PADE (	1.9°C nec	Volume	40ml														**************************************
COOL 10 4 PLANES CENTION	MDL U	at lib	2.41	HYDRA-						1	1			<del> </del>	ļ	1		*
				ZINE	I				1									
S	AMPLE ANA	ALYSIS		1								İ						5.5
AA04101																		
Sample No.	Matrix*	Date Sample	d Time Sampled															
BOBMR3	W	5/11/94	1330	X														
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Chain of Possession			Sign/Print Names			<u> </u>	SPECIA	L INSTRU	CTIONS	. /	$\overline{}$	<del></del>			-1	/	Matrix *	,
Relinquished By	Date/Tin	ne Rece	ived By		Date/Ti	me	٦ <sub>a</sub>	Kos	141	/	b+	e Cl	ue	6/1	5/9	/ s	= Soli	. 1
K JAMPA K TIARP	5/4/94	1437 100	disposition	5-119	વ 143	35	-0		) 7	, , ,	<u> </u>		_		,	50	= Sedin	
Relinquished By	Date/Tin	ne Rece	load By		Date/Ti	me .	1 .	$\mathcal{O}$	<i>'</i>			,				SL W	= Sludg = Water	r
Town Ethoras 5	5-11-9Y	1530	1/ 1/0	N WERNE	40	30 1-94	1 80		for	rac	dio o	ictiv	ity.	-0K		O A	= Oil = Air	
Reliniquished By	Date/Tin	ne Rece	ived By	LOCO II	Date/Ti			an	0	•			Ø			DS DL	= Drum = Drum	
Ducener Suce	14 5/12	184	v													T	= Tissus = Wipe	
Relinquished By	Date/Tin		ived By		Date/Ti	me										N X	= Liquid = Veget = Other	tation
LABORATORY Received By		L	a Title			<u> </u>	1							Date/Ti	me			
SECTION Storia	Dota	to	Samo	le Rec	euter.	R							5/18	8/94	1230	<b>,</b>		
FINAL SAMPLE Disposal Methodisposition	nod		~ 79		4		Dispos	ed By	<del></del>					Date/Ti				
DISTRIBUTION: Original Samp	le Yellow	- Sampler														BC-	6000-828 (	12/92)

														C	0040	1dd02	. I	) ster 14051
Westinghouse Hanfo	ord	(	CHAIN O	F CU	STOD	` Y/S/	AMPI	LE AI	NALY	'SIS I	REQU	JEST			Page		of	1
Collector			Company Cont	tact	·					Telepho	ne No.	····				Priort		
F. Isapo		***	PH BUTCHER							509-37	6-4388					X Norm	<u>al</u>	
Project Designation (1)			Sampling Loca	tion						SAF No 94-087	•							
ce Chest No. FR-21			Field Logbook	No.						Method	of Shipm	ent	_	halad	,			
Shipped To			Offsite Propert							Bill of	nding/Air I	Bill No	AJS.	s/11/94		<del></del>	107	
RTEK				N	294-0	09	594 -	- /					W	14	0213	5/1	48	
ossible Sample Hazards/Remark	•		Preservative	HClpH<2						-								4
			Type of	III CEPTINE					1	1			<b> </b>					
			Container	Gs				ļ		-			<b> </b>		<del> </del>	├	ļ	- Cathan
			No. of Container(s)	1				1	1	1								Catesas Parasa Parasa Parasa Tarasa
Special Handling and/or Storage		GOD And	Volume	7.0 .											1			非
OOL TO 4 DEGREES CENTIGRA	ADE O	goc recid	<u> </u>	40ml HYDRA-	<del>  </del>			<del>                                     </del>	-	<del> </del>	<del> </del>		<del> </del>	<del> </del>	<del> </del>			zgalest
		ac pero		ZINE				1						1				
SA	MPLE ANA	ALYSIS											1					S
AAOHOZ																		
Sample No.	Matrix*	Date Sampled	Time Sampled		6883		78.8			-				-	•		-	
BUBMRT		5/11/94	1150	V				1										
000777	Ä	1/11/19	11120	<del>  ``</del>	-		<del>                                     </del>	-	<del>                                     </del>		<del> </del>		<del> </del>	<del> </del>	-		<b> </b>	
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			<del> </del>	<del>                                     </del>				ļ	-	-		-		<del> </del>		<u> </u>	<del> </del>	
				<u> </u>				<u> </u>										
CHAIN OF POSSESSION		_	n/Print Names				SPECIA	L INSTRU	,	,	$\bigcap$	/ .	<u> </u>	<i>(</i> -)	1,100		Matrix	•
Relinguished By	Date/Tin	ne Received	Ву		Date/Time		1 9	Ked	44		Va	te c	Xue	' <b>'6</b> /	15/94	_   S	= Soil	
h. Jasa/K Trape	5/4/9	MAD MY	V. March	D 3-1	194 14	35	′	( ()	)							SE	= Sedir = Solid	1
College is book But	Dete/Tie	ne Becelund	LPV (		Date/Time				,				4	- 11		SL W	= Sludq = Wate	
Yay mr. 150000 5-1	1-94 15	35 /	Tweener	1 Cipi	Date/Time 1535 UNLY 57	1-54	I Sca	an s	for	ra	dioa	etive	Ty-	OK		I O	= Oil = Air	
Relinguished By		ne 1000 Beceived	rBy	A JIVX	Date/Time		1	L	9				0			DS	= Drum	n Solids n Liquids
Dureney L Sure		1/2/54	U													T	= Tissu	.00
Relinquished By	Date/Tin	ne Received	Ву		Date/Time		1									L	= Wipe = Liqui	d
							i									×	= Vege = Other	
Received By			Title											Date/Tir	me			
LABORATORY SECTION	10.	++	0 -	7.	•								5/1			۸		
Disposal Matho	- Nap	aln	Somple	Dece	ung		Diepos	ad By					// (	Date/Tir	123.	υ		
DISPOSITION					<i>U</i>		Dispos	ied by						D=(8)	114			
DISTRIBUTION: Original- Sample	Yellow	- Sampler							· · · · · · · · · · · · · · · · · · ·							BC-f	6000-828	(12/92)

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Westinghouse Hanford	<u>.</u>		CHAIN O	F CU	STOI	OY/S	AMP	LE AI	NALY		REQU	IEST					62 <u>9</u>	paten <u>405</u> [8] —
Company  Collector  2. Tapp  Project Designation 100-FR-3 Ice Chest No. GR - ZI  Shipped To ORTEK  Possible Sample Hazards/Remarks			Company Comp PH BUTCHER Sampling Loca UCC Field Logbook F-F- Offsite Propert Preservative Type of Container No. of Container(s)	tion No.	W94 -		0590		NAL	Telepho 509-37 SAF No 94-087 Method EMERY	one No. 76-4388	ent	402	137	Date T	umeround Priort	ј у	
Special Handling and/or Storage COOL TO 4 DEGREES CENTIGRADE  SAMF	O.	9 pecidat Lab Lysis	Volume	40ml HYDRA- ZINE														5
	latrix*	Date Sampled 5/11/94	Time Sampled	X														
Relinquished By  Relinquished By  Luce new Lowerne	Date/Tim	Received Received	eeney L. Si	5-11- woney	Date/Tir		SPECIAL SPECIAL	L INSTRU	ctions / () )	Vadeo	Di	ite vity	Chie	2 61	115/90	S SE SO SL V O A DS DL T WI L V X	Matrix*  = Soil  = Sedim  = Solid  = Siludge  = Water  = Oil  = Air  = Drum  = Tissue  = Wipe  = Liquid  = Veget  = Other	Solids Liquids
LABORATORY BECTION Planta Disposal Method Disposition	ofta	r-,	Surgale	Recei	ving		Dispos	ed By				S	1/18/19	Date/Tir / Date/Tir	1230	-		

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DISTRIBUTION: Original Sample Yellow - Sampler

Westinghouse Hant	ford	(	CHAIN O	F CU	STOI	DY/S	AMPI	LE AI	NALY	'SIS I	REQL	JEST					011		10h
Collector IC T(app G) Project Designation 100-FR-3	G Ham	elter	Company Cont PH BUTCHER Sampling Loca	tion						Telepho 509-37 SAF No 94-087	6-4388					Priort	y		024
Ice Cheet No. ER21			Field Logbook							FMFRY	of Shipm								
Shipped To ORTEK			Offsite Propert	14 -0	-050	74-1	:			Bill of L	1402	Bill No.	48						
Possible Sample Hazards/Remark	ks		Preservative  Type of Container	HClpH<2															II I
			No. of Container(s)	1															
Special Handling and/or Storage COOL TO 4 DEGREES CENTIGE	RADE 3C	5/12/94 1430	Volume	40ml											-				Edg
AAOHOUL	O.9 SAMPLE AN	e Recidi	at Lub	ZINE															A STATE OF THE STA
Sample No.	Matrix*	Date Sampled	Time Sampled																
308 MVI	¥	5/12/94	1130	X															
	<u> </u>	SI-	n/Print Names	<u> </u>	L		SBECIA	LJINSTRU	CTIONS								Matrix	,	
Relinquished By Relinquished By Relinquished By Relinquished By Relinquished By Relinquished By	Date/Til  Date/Til  Date/Til  Date/Til	ne Received	MS. Model Mysson:	JS/my25	Date/Ti	t,400 me 430 me	4	Les	(-IV	rdio i				6/19	5/94	S SE SOL WO A D DL T WL V X	= Soil = Sedin = Solld = Sludg = Wate = Oil = Alr	solids Liquids tiduids	
LABORATORY Received By SECTION	11 -	<del></del>	Title	,		_	•						5/	Date/Ti		•			
FINAL SAMPLE DISPOSITION	hod	M	James	re K2	cem	ng.	Dispos	ed By					-//	Dete/Ti	230 me				

DISTRIBUTION: Original- Sample

Company

Project Designation

Sample No.

Relinquished By

LABORATORY SECTION

FINAL SAMPLE DISPOSITION

Collector

100-FR-3

Shipped To

ORTEK



**Organics** 

Extractions





TELEPHONE CONVERSATION RECORD 

	6		
WHO: YOUR NAME:	L'alebite	DATE: <u>511919</u> 5	TIME: 3:00 pm
	RECEIVED CALL		
CLIENT NAME:	Clay Swith com	PANY: WHC	•
PHONE №: (50	Clay Smith com	FAX №: (509) 3	72-2106
WHAT: PROJECT:		BATCH Nº:	
	Legdragine S	amples	
	CONVERSATION:	·	
	Cavel the a Sample 10 #	nolipis or	٠
-	Sample 1D #	BAX9	
,			
Olso	from now on	contact (	la Smith
die	from now on retter of	Lan Savi	ple.
WHEN: ACTION REQUI	RED:		
ACTION BY:			DATE: / /
COMMENTS:			
N			
:			
			Clicat Samina
CC: Working f		Lab Director Project Manager	Client Services Administration

ORTEK SAMPLE RECEIVIN	G OUT OF CONTROL FORM
COMPANY NAME: WESTING HOUSE HOWFURD CO	CONTACT PERSON: PH BUTCHER
PROJECT NAME: 100E /EFL-1054	REPORTED BY: S N
BATCH NUMBER:	SAMPLE NUMBERS:
DATE: TIME: 5/18/94 1249	PHONE NUMBER: 509-376-4388
☐ HOLD TIME ☐ IMPROPER PRESERVATIVE ☐ PAPERWORK DISCREPANCY ☐ IMPROPER CONTAINER	☐ SAMPLE TEMPERATURE°F ☐ METHODOLOGY ☐ INSUFFICIENT VOLUME ☐ OTHER
DESCRIPTION: COC describes SAIN	PLE # AS BOBMX8 -
SAMPLE ID = BMX9	
	0 0
PERSON RESPONSIBLE FOR RESOLUTION:	bite colled PH Butcher
CLIENT RESPONSE: Co & Ded aus	weing Machine to call
:	15 cm, 7115, 4:30
5/19/95 - 8:30 AM Butch	er called back.
BOBMX 8- not full	lazine.
Sample ID : Con	set Charged the
CAC YO BMX9	
5/19/85-10:10AM Clay 50	niel Callod- The COC
man hooke a b	e wiel check wish
Customer to see it	we can so obead w/soupl
SIGNATURE: Joulla Cetebrale	TIME: 1:15 pm DATE: 5/8/9:

cc: Working File
Mary Jo Nash
Tori Cook
Phil Scott
Barb Rutten
John Rather
Chris Groh
Bill Jackson
Jennifer Fazio

ORTEK SAMPLE RECEIVING OUT OF CONTROL FORM				
COMPANY NAME: DE Westinghause	CONTACT PERSON: PA Buta	ber		
PROJECT NAME:	REPORTED BY: Ware	Cen		
BATCH NUMBER: 9405/8	SAMPLE NUMBERS: AABUDUP98			
DATE: TIME: 5/23/94 11:20	PHONE NUMBER: 509-376-4	1888		
☐ HOLD TIME ☐ IMPROPER PRESERVATIVE ☐ PAPERWORK DISCREPANCY ☐ IMPROPER CONTAINER	□ SAMPLE TEMPERATURE°F □ METHODOLOGY □ INSUFFICIENT VOLUME □ OTHER	•		
DESCRIPTION: NO date /time 08 Collection listed on ("OC"				
Date Home 5/9/94 0940 listed on bottle lakel				
PERSON RESPONSIBLE FOR RESOLUTION:				
CLIENT RESPONSE:				
,				
SIGNATURE:	TIME:	DATE:		

cc: Working File
Mary Jo Nash
Tori Cook
Phil Scott
Barb Rutten
John Rather
Chris Groh
Bill Jackson

Jennifer Fazio

SAM	PLE NONCOMPLIANCE REPORT	
Client: DOE/LUESting	DUSCAttention: PH	Dutcher
Project Name/No:	Received Date:	8/94
Batch No: 9405/8/ Client Phone: 509-376-45	Sample No: AAØ46 Sample Receiving Initials:	
	dling procedures required by state and fede pratory not meeting these regulations will be ck (%) below.	
Samplers) were received at°C.	which is above the EPA requirements of 4	°C.
Sample: s) not properly preserved per	EPA requirements for the following param	eters:
		<u> </u>
Sample(s) received in improper bottle	es for the following parameters:	
Sample(s) received beyond the EPA	maximum holding time for the following pa	rameters:
Parameter	Max. Holding Time	Past-Time
Parameter	Max. Holding Time	Past-Time
Parameter	Max. Holding Time	Past-Time
Parameter	Max. Holding Time	Past-Time
Parameter  Sampling date/time not supplied by the supplied by		Past-Time
Sampling date/time not supplied by to the Samples received without Chain Of the Samples received with	he client. Holding time not known.  Custody or proper paperwork.	Past-Time
Sampling date/time not supplied by t	he client. Holding time not known.  Custody or proper paperwork.	Past-Time
Sampling date/time not supplied by to the supplied by the supp	he client. Holding time not known.  Custody or proper paperwork.	
Sampling date/time not supplied by to the supplied by the supp	he client. Holding time not known.  Custody or proper paperwork.	
Sampling date/time not supplied by to On Control Control Comments:  Samples received without Chain Of Comments:  Sample(s) not field filtered as require requested, then preserved.	he client. Holding time not known.  Custody or proper paperwork.	lab filtered upon receipt as
Sampling date/time not supplied by to On Control Control Comments:  Samples received without Chain Of Comments:  Sample(s) not field filtered as require requested, then preserved.	he client. Holding time not known.  Custody or proper paperwork.  ed for dissolved parameters. Samples were does not meet proper sample handling.	lab filtered upon receipt as
Sampling date/time not supplied by to on Comments:  Samples received without Chain Of Comments:  Sample(s) not field filtered as require requested, then preserved.  VOC vial(s) received with headspace Comment:	he client. Holding time not known.  Custody or proper paperwork.  ed for dissolved parameters. Samples were does not meet proper sample handling.	lab filtered upon receipt as

cc: Working file, Dept, Supervisors, Project Manager.

V2.201664 Contractor **CONTROL NUMBER** (To be obtained from PROPERTY MANAGEMENT OFF-SITE **PROPERTY CONTROL WHC** PART I - TO BE COMPLETED BY ORIGINATOR Department Section Field & Analytical Supp : ER Field Sampling ER Eng Support The following items are to be shipped from X Contractor ☐ Vendor Routing **▼** Contractor □ Vendor Shipped to Off-site Custodian ORTEK ENV LAB 1609 Western Ave Ms Mary Jo Doxtator-Nash P.O. Box 12345 **Full Title** Green Bay, WI 54307-2435 Quantity **Original Cost** Description (Include Serial and any Government Tag Numbers) Sample #: 30 MVI FORMTS BORN'S SO BARELIN FROM TO CONTROL TO CONTR 1 N/A Cooler ID:

Polycooler with groundwater samples packed in wet ice and Sample #: lbs. vermiculite Classified **I** Unclassified / Shipped Under DOE Contract Shipped Under Contractor's Use Permit Contract Necessity for the Off-Site Use of this Property Sampling supports RI/FS work in the 8111 of lading # 140213 7748 CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPPING. RM Survey No. RM Clearance for Public Release I lower Location of Property (Area & Bidg.) Contact 509) 376-4388 P. H. Butcher 200 BB-5 Cost Code to be Charged 88410 Date Ready for Shipment Approximate Date This Property will be Returned 5/17/aU Originated By Date Authorized By Date Date Property Management/Approval Signature and Name of Property Control **Custodian Date** PART II - TO BE COMPLETED BY SHIPPING Return Order No. Purchase Order No. **Date Issued** Signature of Recipient Date Issued DISTRIBUTION Shipping Operation - Sign all Copies and Forward to: **By Originator** White, Green, Yellow, Pink - Property Management White - Property Management Green - Property Control Custodian (Issuing Office) Yellow - Retain Pink - Originator Goldenrod - Retain

54-3000-479 (09/89)

# **VALIDATION SUMMARY**

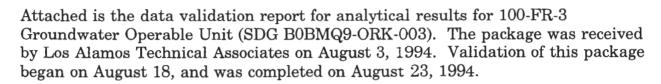


# Los Alamos Technical Associates, Inc.

8633 Gage Blvd. / Kennewick, WA 99336 / Telephone (509) 783-4369 / FAX (509) 783-9661 August  $23,\,1994$ 

Karl Pool Westinghouse Hanford Company P.O. Box 1970 Richland, WA 99352

Dear Karl,



If you have any questions, please let me know.

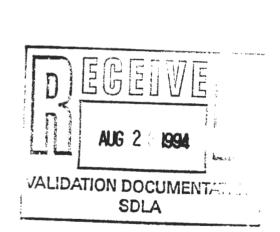
Sincerely,

Janet Jones

Senior Environmental Engineer

cc: Chris Haecker, LATA

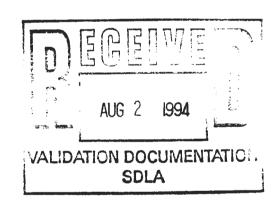
VW402.61 file



7122/96



# DATA VALIDATION REPORT for 100-FR-3 Groundwater Operable Unit SDG BOBMQ9-ORK-003 LATA VW402.61



Westinghouse Hanford Company P.O. Box 1970 Richland, Washington 99352

August 23, 1994

# 9713517.1668

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9713517.1669

### 100-FR-3 Groundwater Operable Unit Data Validation Narrative

#### INTRODUCTION

All samples in Sample Delivery Group (SDG) BOBMQ9-ORK-003 were validated at level "D" as defined in the Data Validation Procedures for Chemical Analysis (WHC-SD-EN-SPP-002).

The data package was received by Los Alamos Technical Associates (LATA) on August 3, 1994. Validation began on August 18, 1994 and was completed on August 23, 1994.

The chemical analyses were performed by Ortek.

#### ANALYSES REQUESTED

Twelve (12) water samples numbered BOBMQ9, BOBMY7, BOBMT7, BOBMV5, BOBMW7, BOBMS5, BOBMS9, BOBMR3, BOBMR7, BOBMS1, BOBMV1, and BOBMT3 were collected on May 6, 9, 10, 11, 12, 1994 by WHC and transferred to Ortek for analysis. The following determinations were conducted on all of the samples in this SDG:

Hydrazine

Method ASTM D1385

#### DATA QUALITY OBJECTIVES

The data quality objectives for 100-FR-3 Groundwater Operable Unit are specified in the Remedial Investigation/Feasibility Study Work Plan for the 100-FR-3 Operable Unit (DOE/RL-91-53, Rev. 0). Precision, accuracy, and detection limit requirements for the project have been derived from [the Third Edition of SW-846 (EPA, 1992)]. Maximum holding times are listed in the 3rd Edition, Final Update I of SW-846 (EPA, July 1992).

The primary objective of the data validation effort was to ensure these data quality objectives were met, and that the data are usable and defensible. This was accomplished through a detailed examination of the data package to recreate the analytical process and verify that proper and acceptable analytical techniques had been applied. The data package was checked for correct submission of required deliverables, correct transcription of raw data to the summary forms, and for proper calculation of a number of parameters.

Precision. Goals for precision were met for all sample results.

Accuracy: Goals for accuracy were met for all sample results.

Sample Result Verification: All sample results were supported in the raw.

Detection Limits: Detection limits goals were met for all sample results.

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### DATA QUALITY OBJECTIVES (Cont.)

Completeness:

The data package was 100% complete for the requested analyses.

Data qualifiers are assigned to any results that have been determined to be deficient. These are discussed below.

#### MAJOR DEFICIENCIES (REJECTED DATA)

The following major deficiencies resulted in the qualification of the results as unusable.

· No major deficiencies were observed.

#### MINOR DEFICIENCIES

The following minor deficiencies were discovered. These minor shortcomings are not expected to significantly affect the overall quality of the data.

#### **HYDRAZINE**

No deficiencies were observed.

#### COMMENTS

• There is no VEDD (Validation Electronic Data Deliverable) or Data Qualification Summary included with this report due to the fact that no qualifications were made or changed by the validator.

#### REFERENCES

EPA July 1992, Test Methods for Evaluating Solid Waste (SW-846), Third Edition; U.S. Environmental Protection Agency, Washington, D.C.

WHC 1993, Data Validation Procedures for Chemical Analyses, WHC-SD-EN-SPP-002, Rev. 2, Westinghouse Hanford Company, Richland, Washington.

DOE 1992, Remedial Investigation/Feasibility Study Work Plan for the 100-FR-3 Operable Unit, DOE/RL-91-53, Rev. 0, Department of Energy, Hanford Site, Richland, Washingotn.

# 9713517\_1672

### DATA VALIDATION APPLIED QUALIFIERS

Qualifiers which may be applied by data validators in compliance with the procedures herein are as follows.

- U- Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the sample quantitation limit corrected for sample dilution and moisture content by the laboratory.
- UJ- Indicates the compound or analyte was analyzed for and not detected in the sample. Due to a QC deficiency identified during data validation, the associated quantitation limit is an estimate.
- J- Indicates the compound or analyte was analyzed for and detected. The associated concentration is an estimate, but the data are usable for decision making purposes.
- BJ- Applied to inorganic analyses only. Indicates the analyte concentration was greater than the IDL but less than the CRDL and is considered an estimated value.
- R- Indicates the compound or analyte was analyzed for, detected, and due to an identified QC deficiency the data are unusable.
- UR- Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data are unusable due to an identified QC deficiency.
- JN- Indicates a tentatively identified compound (TIC) that has been determined to be valid in terms of identification and quantitation.
- UJN- Indicates a tentatively identified compound (TIC) that has been determined to be presumptive and valid (JN) in terms of identification and quantitation and has been qualified as undetected (U) due to associated blank contamination.
- NJ- Indicates presumptive evidence of a compound at an estimated value. The data may not be valid for some specific application (i.e., usable for decision making purposes).
- N- Indicates presumptive evidence of a compound. The data may not be valid for some specific applications (i.e., usable for decision making purposes).

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#### LABORATORY APPLIED QUALIFIERS

Qualifiers which may be applied by the laboratory in compliance with applicable requirements are as follows.

#### Organic Data Qualifiers

- U- Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the sample quantitation limit corrected for sample dilution and moisture content by the laboratory.
- J- Indicates an estimated value. This flag is used when estimating concentrations of tentatively identified compounds (TICs) or when the presence of a TCL compound is confirmed at a concentration of less than the CRQL but greater than the IDL.
- N- Indicates presumptive evidence of a compound. This flag is used only by the laboratory for TIC results when the identification is based on a mass spectral library search.
- P- This flag is used for pesticide/Aroclor target analytes when there is greater than 25% difference for detected values between the quantitation and confirmation GC columns. The lower of the two concentrations is reported on the report form and the result is flagged with a "P".
- C- This flag applies to pesticide results where the identification has been confirmed by GC/MS. This flag should not be used by the laboratory if GC/MS confirmation was attempted but unsuccessful, in which case, the laboratory should use an "X" flag as defined below. The "X" flag is then defined in the SDG narrative.
- B- This flag applies to results in which the analyte was detected in both the sample and the associated blank. The combination of the "B" flag with the "U" flag ("BU" or "UB") is expressly prohibited in the analytical SOW.
- E- This flag identifies compounds whose concentrations exceed the calibrated range of the GC/MS instrument.
- D- This flag identifies compounds identified in an analysis at a secondary dilution factor.
- A- Indicates a TIC which is a suspected aldol-condensate product.
- X- This is a non-specific flag used to properly define the results. If used, this flag must be properly defined within the body of the SDG.

# 9713517.1674

#### LABORATORY APPLIED QUALIFIERS

#### Inorganic Qualifiers

- U- Indicates the analyte was analyzed for but not detected in the sample.
- B- Indicates the analyte concentration is less than the CRDL but greater than the IDL.
- E- Indicates the value reported is estimated due to the presence of interference.
- M- Indicates duplicate injection precision criteria were not met during graphite furnace (GFAA) analysis.
- N- Indicates spiked sample recovery was not within the control limits.
- S- Indicates the reported value was determined by the Method of Standard Additions (MSA).
- W- Indicates post-digestion spike for GFAA analysis is outside control limits and the sample absorbance is less than 50% of the spike absorbance.
- \*- Indicates duplicate analysis was not within control limits.
- +- Indicates the correlation coefficient (r) for the MSA was less than 0.995.

**Data Summary Tables** 

### **GENERAL CHEMISTRY DATA SUMMARY TABLE**

FILE #: VW 402.6	61	HEIS #:	вовмо9	BOBMY7	BOBMT7	B0BMV5	B0BMW7	B0BMS5
		Date:	5/18/94	5/18/94	5/18/94	10-May-94	10-May-94	10-May-94
		Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
Constituent	CAS #	Units	Results Q	Results Q	Results Q	Results Q	Results Q	Results Q
Hydrazine	302-01-2	ug/L	1.00	1.60	1.00	1.00	1.00	1.00

FILE #: VW 402.	61	HEIS #:	B0BMS9	B0BMR3 .	B0BMR7	B0BMS1	B0BMV1	B0BMT3
		Date:	10 <b>-M</b> ay-94	11-May-94	11-May-94	11-May-94	12-May-94	12-May-94
		Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
Constituent	CAS#	Units	Results Q	Results Q	Results Q	Results Q	Results Q	Results Q
Hydrazine	302-01-2	ug/L	3.20	1.00	1.60	2.00	2.10	3.20

entered by: C.S. date: \$/18/94

checked by: WTC date:

Sample Results (Form I's)



**ENVIRONMENTAL LABORATORY** 

1609 Western Avenue

P.O. Box 12435

(414) 498-2222 (800) 236-4067 → FAX (414) 498-4067

Green Bay, WI 54307-2435

Client Phone: 509-376-4388

\*\* Certified for Environmental Analytical Services by Wisconsin DNR Laboratory Certification No. 405099530

Sample Analysis Report

TO: US DEPARTMENT OF ENERGY C/O WESTINGHOUSE HANFORD

2355 STEVENS DR RICHLAND WA 99352

Attn: P H BUTCHER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

Batch #: 9405181

LIMS #: AA04453

Sample ID: BOBMQ9

Sample Matrix: GROUNDWATER

#### Collection Information

Date-Time-By: 05/06/94 -10:45

Loca

Location:			MDL/		Extraction	Supervisor
Test/Parameter	Method	Result	PQL	Units	Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	<b>ASTM D1385</b>	1.0	1.0	UG/L	06/03/94	SAD

8-13-94 Woc

Signed

Lab Director -Rick Everson

Date 6/24/94

000011 Printed on Recycled Paper



#### ENVIRONMENTAL LABORATORY

1609 Western Avenue P.O. Box 12435

(414) 498-2222 (800) 236-4067

FAX (414) 498-4067

Green Bay, WI 54307-2435

\*\* Certified for Environmental Analytical Services by Wisconsin DNR Laboratory Certification No. 405099530 \*\*

### Sample Analysis Report

To: US DEPARTMENT OF ENERGY Client Phone: 509-376-4388 C/O WESTINGHOUSE HANFORD Client Fax:

COMPANY

2355 STEVENS DR RICHLAND WA 99352

Attn: P H BUTCHER

Batch #: 9405181

LIMS #: AA04454

Sample ID: BOBMY7

Sample Matrix: GROUNDWATER

Date Received: 05/18/94 Date Reported: 06/23/94

Project ID: 100-FR-3

#### Collection Information

Date-Time-By: 05/06/94 - 10:45

Location:

Analysis/ Analyst/

MDL/ Extraction Supervisor POL Units Date Approval

Test/Parameter ORGANICS SUPERVISOR APPROVAL 06/22/94 COMPLETE RTE UG/L 06/03/94 SAD HYDRAZINE **ASTM D1385** 1.6 1.0

Result

Method

8-13-94 (WIE)

Signed

Date 6/24

000012





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# Sample Analysis Report

To: US DEPARTMENT OF ENERGY C/O WESTINGHOUSE HANFORD

COMPANY

2355 STEVENS DR RICHLAND WA 99352

Client Phone: 509-376-4388 Client Fax:

Attn: P H BUTCHER

Batch #: 9405181

LIMS #: AA04455

Sample ID: BOBMT7

Sample Matrix: GROUNDWATER

Date Received: 05/18/94 Date Reported: 06/23/94

Project ID: 100-FR-3

#### Collection Information

Date-Time-By: 05/09/94 -13:15

Location	•		MDL/		Extraction	Supervisor
Test/Parameter	Method	Result	PQL	Units	Date	Approval
ORGANICS SUPERVISOR APPROVAL HYDRAZINE	ASTM D1385	COMPLETE 1.0	1.0	UG/L	06/22/94 06/03/94	RTE SAD

8-23-94 WE

Signed

Lab Director -Rick Everson

Date 62494

Printed on Recycled Paper



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### Sample Analysis Report

TO: US DEPARTMENT OF ENERGY
C/O:WESTINGHOUSE HANFORD
COMPANY

RICHLAND WA 99352

COMPANY 2355 STEVENS DR

Attn: P H BUTCHER

Client Phone: 509-376-4388

Client Fax:

Batch #: 9405181

LIMS #: AA04097 Sample ID: BOBMV5

Sample Matrix: GROUNDWATER

Date Received: 05/18/94 Date Reported: 06/23/94

Project ID: 100-FR-3

#### Collection Information

Date-Time-By: 05/10/94 - 11:06

Analysis/ Analyst/ Location: MDL/ Extraction Supervisor Test/Parameter Method Result PQL Units Date Approval ORGANICS SUPERVISOR APPROVAL COMPLETE RTE 06/22/94 **ASTM D1385** UG/L HYDRAZINE 1.0 1.0 06/03/94 SAD

8-23-94 dito

Signed

Lab Director -Rick Everson

Date 6/24/94

000014





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(414) 498-2222 (800) 236-4067 FAX (414) 498-4067

Green Bay, WI 54307-2435

\*\* Certified for Environmental Analytical Services by Wisconsin DNR Laboratory Certification No. 405099530 \*\* Sample Analysis Report

> To: US DEPARTMENT OF ENERGY C/O WESTINGHOUSE HANFORD COMPANY

> > 2355 STEVENS DR RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388 Client Fax:

Batch #: 9405181 LIMS #: AA04098 Sample ID: BOBMW7

Sample Matrix: GROUNDWATER

Date Received: 05/18/94 Date Reported: 06/23/94

Project ID: 100-FR-3

#### Collection Information

Date-Time-By: 05/09/94 - 09:40

Analysis/ Analyst/ Location: MDL/ Extraction Supervisor Test/Parameter Method Result POL Units Date Approval COMPLETE RTE ORGANICS SUPERVISOR APPROVAL 06/22/94 UG/L HYDRAZINE **ASTM D1385** 1.0 06/03/94 SAD

9-14-94 601

Lab Director -Rick Everson





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Green Bay, WI 54307-2435

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### Sample Analysis Report

To: US DEPARTMENT OF ENERGY

C/O WESTINGHOUSE HANFORD

COMPANY

2355 STEVENS DR RICHLAND WA 99352

Attn: P H BUTCHER

Date Received: 05/18/94

Client Fax:

Date Reported: 06/23/94

Project ID: 100-FR-3

Client Phone: 509-376-4388

The state of the s

Batch #: 9405181

LIMS #: AA04099
Sample ID: BOBMS5

Sample Matrix: GROUNDWATER

### Collection Information

Date-Time-By: 05/10/94 - 10:00 -

Togation

Location:			VDT /		Analysis/	Analyst/	
Test/Parameter	Method	Result	MDL/ PQL	Units	Date	Supervisor Approval	
ORGANICS SUPERVISOR APPROVAL HYDRAZINE	ASTM D1385	COMPLETE 1.0	1.0	UG/L	06/22/94 06/03/94	RTE SAD	

8-24-94 25

Signed

Lab Director -Rick Everson

Date 6/24/94

000016





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(414) 498-2222 (800) 236-4067 FAX (414) 498-4067 Green Bay, WI 54307-2435

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### Sample Analysis Report

To: US DEPARTMENT OF ENERGY

C/O WESTINGHOUSE HANFORD

COMPANY

2355 STEVENS DR

RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388

Client Fax:

Batch #: 9405181

LIMS #: AA04100

Sample ID: BOBMS9

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

#### Collection Information

Date-Time-By: 05/10/94 -12:00

Location:					Analysis/	Analyst/
•			MDL/		Extraction	Supervisor
Test/Parameter	Method	Result	PQL	Units	Date	Approval
ORGANICS SUPERVISOR APPROVAL HYDRAZINE	ASTM D1385	COMPLETE 3.2	1.0	UG/L	06/22/94 06/03/94	RTE SAD

8-24-94 WX

Lab Director -Rick Everson





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Green Bay, WI 54307-2435

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> To: US DEPARTMENT OF ENERGY C/O WESTINGHOUSE HANFORD

> > COMPANY

2355 STEVENS DR RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388 -Client Fax:

Batch #: 9405181

LIMS #: AA04101

Sample ID: BOBMR3

Sample Matrix: GROUNDWATER

Date Received: 05/18/94 Date Reported: 06/23/94

Project ID: 100-FR-3

### Collection Information

Date-Time-By: 05/11/94 - 13:30

Location:					Analysis/	Analyst/	
•			MDL/		Extraction	Supervisor	
Test/Parameter	Method	Result	PQL	Units	Date	Approval	
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE	
HYDRAZINE	ASTM D1385	1.0	1.0	UG/L	06/03/94	SAD	

Lab Director -Rick Everson

Date 6/34/9





P.O. Box 12435

(414) 498-2222 (800) 236-4067 FAX (414) 498-4067

Green Bay, WI 54307-2435

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### Sample Analysis Report

To: US DEPARTMENT OF ENERGY C/O WESTINGHOUSE HANFORD

COMPANY

2355 STEVENS DR RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388 Client Fax:

Batch #: 9405181

LIMS #: AA04102

Sample ID: BOBMR7

Sample Matrix: GROUNDWATER

Date Received: 05/18/94 Date Reported: 06/23/94

Project ID: 100-FR-3

#### Collection Information

Date-Time-By: 05/11/94 - 11:50 -

Location:					Analysis/	Analyst/	
			MDL/		Extraction	Supervisor	
Test/Parameter .	Method	Result	PQL	Units	Date	Approval	
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE	
HYDRAZINE	ASTM D1385	1.6	1.0	. UG/L	06/03/94	SAD	

Lab Director -Rick Everson



9713517.1617



1609 Western Avenue

P.O. Box 12435

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FAX (414) 498-4067

Green Bay, WI 54307-2435

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. Sample Analysis Report

To: US DEPARTMENT OF ENERGY C/O WESTINGHOUSE HANFORD

COMPANY

2355 STEVENS DR RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388 Client Fax:

Batch #: 9405181

LIMS #: AA04103

Sample ID: BOBMS1

Sample Matrix: GROUNDWATER

Date Received: 05/18/94 Date Reported: 06/23/94

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/11/94 - 09:30

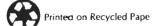
Location:					Analysis/	Analyst/
			MDL/		Extraction	Supervisor
Test/Parameter	Method	Result	PQL	Units	Date	Approval
ORGANICS SUPERVISOR APPROVAL HYDRAZINE	ASTM D1385	COMPLETE 2.0	1.0	UG/L	06/22/94 06/03/94	RTE SAD

3-24-94 (NTC)

Lab Director -Rick Everson

Date 684/9

000020





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(414) 498-2222 (800) 236-4067 FAX (414) 498-4067

Green Bay, WI 54307-2435

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### Sample Analysis Report

To: US DEPARTMENT OF ENERGY

C/O WESTINGHOUSE HANFORD

COMPANY

2355 STEVENS DR

RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388 Client Fax:

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

Batch #: 9405181

LIMS #: AA04104

Sample ID: BOBMV1

Sample Matrix: GROUNDWATER

### Collection Information

Date-Time-By: 05/12/94 - 11:30

Location:			/		Analysis/	Analyst/	
Test/Parameter	Method	Result	MDL/ PQL	Units	Date	Supervisor Approval	
ORGANICS SUPERVISOR APPROVAL		COMPLETE		,	06/22/94	RTE	
HYDRAZINE	ASTM D1385	2.1	1.0	UG/L	06/03/94	SAD	

8-24-94 (WT)

Lab Director -Rick Everson Date 6/24/9





P.O. Box 12435

(414) 498-2222 (800) 236-4067 FAX (414) 498-4067

Green Bay, WI 54307-2435

\*\* Certified for Environmental Analytical Services by Wisconsin DNR Laboratory Certification No. 405099530 \*\*

### Sample Analysis Report

To: US DEPARTMENT OF ENERGY

C/O WESTINGHOUSE HANFORD

COMPANY

2355 STEVENS DR RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388 Client Fax:

Batch #: 9405181

LIMS #: AA04105

Sample ID: BOBMT3

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/24/94

Project ID: 100-FR-3

#### Collection Information

Date-Time-By: 05/12/94 - 09:30

Location:					Analysis/	Analyst/
			MDL/		Extraction	Supervisor
Test/Parameter	Method	Result	PQL	Units	Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/23/94	RTE
HYDRAZINE	ASTM D1385	3.2	1.0	UG/L	06/03/94	SAD

8-24-94 (Woc)

Lab Director -Rick Everson



Checklists

### LATA GENERAL CHEMISTRY DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	А	В	С	0	Е
PROJECT: 10	10 - FR -3		SDG: BOBM	169-0xk-00	13
VALIDATOR:		LATA NO: VV	V407.6/	DATE: 8-18-4	4
SAF NO.:		LAB: Orter	k	CASE:	
QAPP REFERE	ENCE:		SAP REFEREN	ICE:	
	If there is no QAPP of If the document(s)		ntact the WHC Techn fault to the Memod ad	•	
		ANALYSES F	PERFORMED		
☐ Alkalinity 310.1	☐ Chloride 325.3	□ pH 9040/150.1	□ TOC 9060/415.1	□ TDS □TSS 160.1 160.2	0
☐ Anions 300.0	☐ Chromium+6 7196	☐ Phenols 9065/420.1	□ TOX 9020/9022	☐ Sulfate 375.4	
☐ Ammonia 350.3	□ COD 410.1	☐ Phosphorus 365.2	☐ TKN 351.3	☐ Sulfide 9030/376.1	
□ BOD 405.1	☐ Nitrate+Nitrite 353.2	Oil & Grease	□ TPH 9070/418.1	Hydrazine ASTM 08385	
_BBMV/,	TRIX There Are BOBMS 5, BO BOBM T3	, 130BM0	29, BOBM.	77, BOB1	977
s technical verifi	AGE COMPLETENT cation documentative present?	tion present?			
	MES (see HOLDIN ing times acceptable)		,	bry hold	Yes No N/A

Page 1 of 6 8/93/

# 97 3517 1697 LATA GENERAL CHEMISTRY DATA VALIDATION CHECKLIST

	NSTRUMENT CALIBRATION (see CALIBRATION DATA SUMMARY form)
Was	initial calibration performed for all applicable analyses?
	initial calibration results acceptable?
Was	s a calibration check performed for all applicable analyses?
Are	calibration check results acceptable?
*	For methods requiring a calibration curve (three standards and a blank) use the following equation for correlation coefficient (r).
	$r = \frac{\frac{\text{Correlation Coefficient (r)}}{N \sum_{i} x_{i} y_{i} - \sum_{i} x_{i} \sum_{j} y_{i}^{x_{j}}}}{[N \sum_{i} x_{i}^{2} - (\sum_{i} x_{i})^{2}]^{x_{i}} [N \sum_{i} y_{i}^{2} - (\sum_{i} y_{i})^{2}]^{x_{i}}}$
*	For methods requiring ICV/CCV or a calibration check standard, calculate recovery as follows:
	$\%R = \frac{\frac{Recovery}{observed \ value}}{true \ value} \times 100$
Con	nments:

PNO-DVF-013, R1

age 2 of 6 8/32/

# 97:3517:1693 LATA GENERAL CHEMISTRY DATA VALIDATION CHECKLIST

·	NK AND SAMPLE DATA SUMMARY form)
_	s analyzed?
Are laboratory blank re	esults acceptable?
Comments:	<del></del>
	<u> </u>
	· · · · · · · · · · · · · · · · · · ·
,	ACCURACY DATA SUMMARY form)
	analyzed at the required frequency?
Are all spike recoverie	es acceptable?
*	Spike Recovery
	$\%R = \frac{SSR - SR}{SA} \times 100$
	where:
	SSR = spiked sample result SR = sample result
	SA = spike added
	DM9-21-94
	performed at the required frequency? Yes NA
Are all LCS recoverie	s acceptable? Yes No MA
*	Recovery
	$%R = \frac{\text{observed value}}{\text{true value}} \times 100$
	tide value
- Accordi	100 co 2 co doct o 100 co co co de 100
Comments: HCDM	ny to -002 protocal an LCS is optromal
	ODU

PNO-DVF-013, R1

Page 3 of 88/23/94

5. PRECISION (see PRECISION DATA SUMMARY form)		
Nere laboratory duplicate samples analyzed at the required frequency?	No	N/A
Are all duplicate RPD values acceptable?	No	N/A
Relative Percent Difference $RPD = \frac{ OS - D }{\left(\frac{OS + D}{2}\right)} \times 100$ where: $OS = sample concentration (original sample/MS)$ $D = duplicate concentration (duplicate sample/MSD)$		
Comments:		
'. FIELD QC SAMPLES		
Vere field QC samples (field/trip blanks, duplicates, splits, performance audit) identified?Yes	No	N/A
Are field/trip blank results acceptable?	No	(N/A)
Are field duplicate RPD values acceptable?	No	(N/A)
Are field split RPD values acceptable?	No	N/A
Are performance audit sample results acceptable?	No	(N/A)
Comments:		

Page 4 of 68/23/90

## LATA GENERAL CHEMISTRY DATA VALIDATION CHECKLIST

8. ANALYTE QUANTITA	TION	
Was analyte quantitation p	performed properly?	N/A
Are results calculated prop	perly? Yes) No	N/A
★ For methods with o	calibration curves:	
	General Chemistry Results Calculation, water sample  Concentration (μg/L) = CONCW × DfW where:  CONCW = concentration off calibration curve (μg/L) DfW = dilution factor (if any)	
or		
СО	General Chemistry Results Calculation, soil sample  Concentration (mg/Kg) = \frac{(CONCS \times DfS \times VOL)}{(WS \times SS)}  where:  NCS = concentration off calibration curve (mg/L)  VOL = volume of final extract (ml)  WS = weight of sample (g)  DfS = dilution factor (if any)  SS = dry weight conversion [(100 - %moisture) \times 100]	
★ For all other results	s calculations, see the analytical method.	
Comments:		
·		
a REPORTED RESULTS	S AND DETECTION LIMITS	
	requested analyses?	N/A
	ne raw data?	N/A
	_s?	N/A
		14//
		O:

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# 9713517 1696 LATA GENERAL CHEMISTRY DATA VALIDATION CHECKLIST

VALIDATION SUMMARY	
MAJOR DEFICIENCIES:	
There are no major deficiencies.	
- ment me no major acjientines.	
MINOR DEFICIENCIES:	
There are no minor deficiencies	
COMMENTS:	
COMMENTS.	
There is no records tone delined bolding time for	
There is no regulatory defined holding time for hydrazine. All samples were run within 16	
Jana Con lace What war will work the	
- nays or 1835.	
	2 4

LINEAR REGRESSION ANALYSIS				
eneral Chemistry ydrazine OBMQ9-ORK-003	Calibration Date: 2-Jun-94	Date: Validator:	18-Aug-94 Cowan	
Concentration 4.74	Absorbance 0.034	1.0000	r² 1.0000	
24.92 49.46	0.072 0.187 0.373	slope 131.9051	x intercept 0.2556	
101.43 199.43	0.767 1.510	1/slope	y intercept -0.0019	
	ydrazine OBMQ9-ORK-003  Concentration 4.74 9.75 24.92 49.46 101.43	Concentration 4.74 9.75 24.92 49.46 101.43 Calibration Date: 2-Jun-94  Calibration Date: 2-Jun-94  0.034 0.034 0.072 0.187 0.373 0.767	Calibration Date: 2-Jun-94   Date:	

	LINEAR REGRESSION ANALYSIS			
Constituent:	General Chemistry BOBMQ9-ORK-003	Calibration Date:	 Date: Validator:	18-Aug-94 Cowan
_	Concentration	Absorbance	r #DIV/0!	r² #DIV/0!
			slope #DIV/0!	x intercept #DIV/0!
- - -			1/slope #DIV/0!	y intercept #DIV/0!

#### PERCENT RECOVERY (ICV/CCV) Analysis: General Chemistry SDG: BOBMQ9-ORK-003 Date: 18-Aug-94 Validator: Cowan Constituent Observed Value True Value %R 0 49.90 50.10 99.6% Hydrazine #DIV/0!

### MATRIX SPIKE RECOVERY (MS)

Analysis: General Chemistry
SDG: BOBMQ9-ORK-003

Sample ID: BOBMT3

Date: 18-Aug-94
Validator: Cowan

	Spike Sample	Sample	Spike	
Constituent	Result	Result	Added	%R
	SSR	SR	SA	
Hydrazine	26.60	1.60	25.00	100.0%
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				#DIV/01
				#DIV/0!
				#DIV/0!
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#### RELATIVE PERCENT DIFFERENCE Date: 18-Aug-94 Analysis: General Chemistry SDG: BOBMQ9-ORK-003 Validator: Cowan Sample ID: BOBMT3 Original (Sample) Duplicate Constituent concentration concentration **RPD** os D 1.60 1.60 0.0% Hydrazine #DIV/0!

#### GENERAL CHEMISTRY RESULTS CALCULATION, WATER

Analysis: General Chemistry
SDG: BOBMQ9-ORK-003

Date: 18-Aug-94
Validator: Cowan

Sample ID: B0BMS9

	Concentration	Dilution	
Constituent	from curve	Factor	Concentration (µg/L)
	CONCW	DfW	
Hydrazine	3.20	1	3.2
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
3			0.0
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Laboratory Case Narratives



#### **ENVIRONMENTAL LABORATORY**

1609 Western Avenue

P.O. Box 12435

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(414) 498-2222 (800) 236-4067 FAX (414) 498-4067 Green Bay, WI 54307-2435

June 24, 1994

Westinghouse Hanford Co Clay Smith Richland Field Office 345 Hills Street Richland, WA 99352

Dear Mr. Smith:

Subject:

Samples received May 18, 1994

Batch No. 9405181 Sample Nos AA04453-AA04455; AA04098-

AA04105

Enclosed you will find a report of analytical results for sample Nos. AA04453-AA04455; AA04098-AA04105. The samples were analyzed in accordance to the Chain of Custody form contained herewith. We did not experience any difficulties with the analysis. The QC is also enclosed in the data package.

Should you have any questions regarding this report, please feel free to call me at 1-800-236-4067. Please have both reference numbers listed above available when making inquiries regarding this report. Thank you.

Sincerely

Mary Jp Doxtator-Nash

Federal Projects

Approval

Rick Everson

Laboratory Manager

Enclosure

cc: File





Chain-of-Custody Information

Westinghouse Hanf	ord	C	CHAIN O	F CU	STOI	DY/S	AMP	LE A	NALY	/SIS	REQU	JEST			Page Data Te	1 umaround	of	000038
Collector			Company Cont	ant .						Telepho	ne No				-	Priorty	•	<u> </u>
Kio Ce			PH BUTCHER								6-4388					X Norma	al	<u> </u>
Project Designation			Sampling Loca	tion	F	3 (	190. E	5-6)		SAF No								
100-FR-3		1 0 1	Field Logbook	No.	F12-		17-1	) - 6/		94-087 Method	of Shipm	ent						<del></del>
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Possible Sample Hazards/Remark	:8		Preservative	HClpH<2														
			Type of Container	Gs														
			No. of Container(s)	1														
Special Handling and/or Storage COOL TO 4 DEGREES CENTIGRA	ADE	0,9°C	Volume	40ml														
	RE	ord attal		HYDRA- ZINE														
SA	MPLE AN																	
Sample No.	Matrix*	Date Sampled																1
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BMX9																		
and the state of t																		
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Project Designation			PH BUTCHER	4.						509-376					1	<u>X</u>		_
100-FR-3			Sampling Loca	ition / 9	9-F5-	6				SAF No. 94-087								
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Shipped To	Cio		Offsite Propert	ty No.	16-10)	AI	3 3/17	140			ding/Air	Bill No.	AJS 5	111/94 SXX	1/102	12 7	3110	
ORTEK Possible Sample Hazards/Remark			W44-0-059	34-1 1	1294	-0-1	518	100		-	1	T	1		1402	137	148	
rossible Sample Hazards/Hemark	•		Preservative	HClpH<	2								ļ					
			Type of Container	Ģs														
			No. of Container(s)	1														
Special Handling and/or Storage COOL TO 4 DEGREES CENTIGRA	NDE O	.9°C recid	Volume	40ml														
	al	.9°C recid		HYDRA- ZINE														
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		453																
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CHAIN OF POSSESSION			n/Print Names				SPECIA	LINSTRU	CTIONS		76	Aus	0 6/16	5/94 K			Matrix	•
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$\mathcal{L}'$					· Date, init											×	= Vege = Othe	station ir
// Description /	104.511	77.79	Title											Date/Tin	ne			
LABORATORY Blows	Doxte	tor	Sample	Rein	was a								5	18/94	123	0		
FINAL SAMPLE DISPOSITION			700 319	- IXA			Dispos	ed By						Date/Tin				
J.S. Odilion																		

Westinghouse Hanford CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST Company Data Turnaround Priorty Collector Company Contact Telephone No. X Normal K.D.Cu PH BUTCHER 509-376-4388 Project Designation Sampling Location 199-F5-6 FF2-1055 SAF No. 100-FR-3 94-087 Ice Chest No. Field Logbook No. Method of Shipment FR-21 Shipped To IN94-0-0594-Bill of Lading/Air Bill No. 7748 Offsite Property No. ORTEK Possible Sample Hazards/Remarks Preservative HC1pH<2 Type of Container Gs No. of Container(s) Special Handling and/or Storage COOL TO 4 DEGREES CENTIGRADE 0.90 hecid 40ml HYDRA-ZINE Matrix \* Date Sampled Time Sampled BOBMYT 05/06/94 1045 Lan for radioactivity - ok CHAIN OF POSSESSION Sign/Print Names Matrix \* Relinguished By Received By Date/Time = Soil = Sediment = Solid = Sludge Date/Time = Weter = Drum Solide Received By Date/Time = Drum Liquids = Tissue = Wipe = Liquid Relinquished By Date/Time Received By Date/Time Vegetation = Other Received By Date/Time LABORATORY SECTION Disposal Method FINAL SAMPLE DISPOSITION

DISTRIBUTION: Original- Sample Yellow - Sampler

BC-6000-828 (12/92)

- W 104+40

Westinghouse Han Company	ford	(	CHAIN O	F CUS	STOD	Y/S	AMPL	E AN	IALY	SIS F	REQU	EST			Page Data Tu	maround	of1	
Collector . (142)			Company Cont	act						Telephon						Priorty X Norma		000041
Project Designation			Sampling Loca				-			SAF No. 94-087	4300							2
Ice Chest No. 62-21			Field Logbook							Method	of Shipme	int						
Shipped To			Offsite Propert	y N91 -	) - DE	50/1.	-1			Bill of La	ding/Air E	311/196/						
ORTEK Possible Sample Hazards/Remai	rks		Preservative			19	/			140	0171	14 5						
			Type of	HClpH<2														
			Container No. of	Gs														
Special Handling and/or Storage		1	Container(s)	1					_									
COOL TO 4 DEGREES CENTIG	RADE DIS	12 red	Volume	40ml HYDRA-			-											
	a	ELLO		ZINE														
10447	AAC	alysis 04455																
Sample No.	Matrix*	Date Sampled	Time Sampled															
BOBMTT	u	3/-1/2/4	1315	X														
CHAIN OF POSSESSION		Sig	n/Print Names	1			SPECIAL	JNSTRU	CTIONS		,	Λ		1 ,-1	2./		Matrix	•
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FINAL SAMPLE DISPOSITION DISPOSITION			sample	Neces	ur g	<del></del> <u></u>	Dispos	ed By						Date/Tir		·		

. . . .

Company CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	4400 4405
Collector B. T. W 4 1777 E. B. P. BUTCHER POSECT Designation 100-TR-3 Sampling Location 199-F7-1 SAF No. 309-376-4388 Too Chark No. EA-21 Field Logbook No. EEL-1055 Mathod of Shipment PRET  Preservative NCLDH-2  Type of Container GS  No. of Container GS  No. of Container GS  No. of Container GS  No. of Container GS  No. of Container GS  No. of Container GS  No. of Container GS  No. of Container GS  SAMPLE ANALYSIS  AAG4097  Sample No. Matrix* Date Sampled  Time Sampled  No. of Container GS  CHARN OF POSSESSION  Sign/Print Names  Preservative No. of Container GS  Sign/Print Names  CHARN OF POSSESSION  Sign/Print Names  Preservative No. of Container GS  Sign/Print Names  CHARN OF POSSESSION  Sign/Print Names  SPECIAL INSTRUCTIONS  ACL  CHARLOF POSSESSION  Sign/Print Names  Preservative No. of Container GS  Sign/Print Names  SPECIAL INSTRUCTIONS  ACL  CHARLOF POSSESSION  Sign/Print Names  Sign/Print Names  CHARLOF POSSESSION  Sign/Print Names  Sig	
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100-FR-3   100-FR-3	
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Preservative HCLDH CONTROL OF CON	
Type of Container GS  No. of Container(s) 1  Special Handling and/or Storage  DOUL TO 4 DEGREES CENTIGRADE 0.982 Aud Volume  ACLAN  ACULTY  Sample No.  Metrix' Date Sampled  BOBMVS  CHAIN OF POSSESSION  Sign/Print Names  Gallinguished By  Date/Time  Pacinguished By  Date/Time  Date/Time  Date/Time  Pacinguished By  Date/Time	
Special Handling and/or Storage  COL TO 4 DEGREES CENTIGRADE  COL TO 4 DEGREES CENTIGRADE  ACLAS  SAMPLE ANALYSIS  ACULTY  Sample No.  Matrix* Date Sampled  BOBMVS  y  OS (0/94 1106  MORE  BOBMVS  Sign/Print Names  Secilal INSTRUCTIONS  Tallinguished By  Date/Time  Received By  Date/Time  Received By  Date/Time  Received By  Date/Time  Received By  Date/Time  Aculty  SCAN for Radio activity - OK  Sign/Print Names  SPECIAL INSTRUCTIONS  Acute Sho(sy B34 Sign/Print Names  SPECIAL INSTRUCTIONS  Sign/Print Names  SPECIAL INSTRUCTIONS  Acute Sho(sy B34 Sign/Print Names  SPECIAL INSTRUCTIONS	
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Sample No. Matrix* Date Sampled Time Sampled  BOBMVS U 05/10/94 1106  CHAIN OF POSSESSION Sign/Print Names  CHAIN OF POSSESSION Date/Time Received By Date/Time CHAIN CH	
Sample No. Matrix* Date Sampled Time Sampled  BOBMV5 y OS (10/94 1106)  CHAIN OF POSSESSION Sign/Print Names  CHAIN OF POSSESSION Sign/Print Names  Special INSTRUCTIONS  Sign/Print Names  Special INSTRUCTIONS  Sign/Print Names  Special INSTRUCTIONS  Sign/Print Names  Special INSTRUCTIONS  Sign/Print Names  Special INSTRUCTIONS  Sign/Print Names  Special INSTRUCTIONS  Spec	
Sample No. Metrix* Date Sampled Time Sampled  808NVS 4 05 (0 94 1106 X )  CHAIN OF POSSESSION Sign/Print Names  CHAIN OF POSSESSION Sign/Print Names  CHAIN OF POSSESSION Date/Time Received by Date/Time CHAIN OF POSSESSION POSSESSION Sign/Print Names  Many blee K. Dee Shofey B24 N. Whapp K. Trapp 5/10 pay 1/27  Relinquished By Date/Time Received By Date/Time CHAIN OF POSSESSION Date/Time CHAIN OF POSSESSION Sign/Print Names  K. Many k. Trapp 5/10/94 1440 Date/Time CHAIN OF POSSESSION Date/Time CHAIN OF POSSESSION Sign/Print Names  K. Many k. Trapp 5/10/94 1440 Date/Time CHAIN OF POSSESSION Date/Time CHAIN OF POSSESSION Date/Time CHAIN OF POSSESSION Sign/Print Names  K. Many k. Trapp 5/10/94 1440 Date/Time Date/Time CHAIN OF POSSESSION Date/Time CHAIN OF POSSESSION DATE/Time CHAIN OF POSSESSION DATE/Time CHAIN OF POSSESSION DATE/Time CHAIN OF POSSESSION DATE/Time CHAIN OF POSSESSION DATE/Time CHAIN OF POSSESSION DATE/Time CHAIN OF POSSESSION DATE/Time CHAIN OF POSSESSION DATE/Time CHAIN OF POSSESSION DATE/Time CHAIN OF POSSESSION DATE/Time CHAIN OF POSSESSION DATE/Time CHAIN OF POSSESSION DATE/Time CHAIN OF POSSESSION DATE/Time CHAIN OF POSSESSION DATE/Time CHAIN OF POSSESSION DATE/TIME CH	
Sample No. Matrix* Date Sampled Time Sampled  BOBMV 5  y OS (10/94 /106)  CHAIN OF POSSESSION  Sign/Print Names  Special instructions  July Date/Time Hecolved By Date/Time Packing By Date/Time Packi	
CHAIN OF POSSESSION  Sign/Print Names  Special instructions  Alalingulahed By  Date/Time  Received By  Date/Time  Date/Time  Authority  Received By  Date/Time  Date/Time  Date/Time  Date/Time  Date/Time  Date/Time	
Durency Lweeney 5/17/94	
Duesny Lwerry 5/17/94	
Duesny Lwerry 5/17/94	
Duesny Lweney 5/17/94	
Duesny Lweney 5/17/94	
Duesny Laveney 51,7/94	
Duesny Lwerry 5/17/94	Matrix*
Duesny Lwerry 5/17/94	S = Soll SE = Sediment
Durency Lweeney 5/17/94	SO = Solid SL = Sludge
Duesny Laveney 51,7/94	W = Water
Dureny Laverey 51,7/94	A = Air
Newseny Dweeney 5/17/94	DS = Drum Solid DL = Drum Liquio
	T = Tissue Wi = Wipe
	L = Liquid V = Vegetation
Received By Date/Time	X = Other
LABORATORY SECTION Sloria Dottator Sample Received By  Storia Dottator Sample Received By  5/18/94 1230	
FINAL SAMPLE Disposal Method J Disposed By Date/Time	
DISPOSITION Viginal- Sample Yellow - Sampler .	BC-6000-828 (12/9)

Westinghouse Han	ford	C	HAIN O	F CU	STOD	OY/S	AMPI	LE AN	NALY	'SIS F	REQU	EST				_1		
Company					• •	.,5			•						Data Tu	urnaround		4
Collector			Company Con	tact						Telepho					-    	Priorty  X Norma		00m3:33
Project Designation			Sampling Loca							SAF No.								0
100-FR-3 Ice Chest No. 7 1			Field Logbook								of Shipm	ent						<del></del>
Shipped To			Offsite Propert							Bill of L	ading/Air	Bill No.		·	2 (	0611	-(	
ORTEK			Onsite Hoper	V 110.	N94-	0-	0590	4-1		5			War	1-0	-05	,94-	-	
Possible Sample Hazards/Remai	rks		Preservative	HClpH<2														
			Type of Container	Gs														
			No. of Container(s)	1														
Special Handling and/or Storage COOL TO 4 DEGREES CENTIGE	RADE (	0.90e hod		40ml														
TOTAL TO A DEGREEO GENTION		0.9°e pecid		HYDRA- ZINE														
s	SAMPLE AN																	
AAD4 098																		
Sample No.	Matrix *	Date Sampled	Time Sampled		)			1							,			
BOBMWT	U			X														
*				<del>                                     </del>	<del>                                     </del>	_	<del>                                     </del>		<u> </u>									
CHAIN OF POSSESSION		Sign	n/Print Names			1	SPECIA	<u>I</u> L∕anstru	CTIONS			,		1/	· · · · · ·		Matrix	, *
Relinquished By  Nay K, (19) Relinquished By	Date/Tir	me 1430 Received			Date/Tin	ne (13 o	1	es	4V	C	)ate	de	ie G	11519	14	S	= Soil = Sedi	(ment
h. UMary /6-1191	00 5/9	194 Luce	eney b Swa	ener	5/9/94	1930	'									SE SO SL	= Solid = Slud	d
Relinquished By	Date/Til	The Received	Ву		Date/Tin	ne	1 0	U	,		r .	4	. +	- 6/)		w	= Wate	
Valuence I Migable	1 5/17/8	9	0		D-4-/Ti-	<u>.</u>	Sou	en y	for	rac	dev C	LLEEV	uly	UK		A DS	= Air = Drum	n Solide
Relinquished By	Date/Tir	me Received	ву		Date/Tin	ne		U								DL T	= Tissu	n Liquida u <b>e</b>
Relinquished By	Date/Tir	me Received	Ву		Date/Tin	ne										V X	= Wipe = Liqui = Vege = Othe	id etation
LABORATORY Received By	Λ		7 Title				1						/ 1	Date/Tir	ne			
LABORATORY SECTION States	Dotte	tu ,	Somple To	ecen	-15								5/18/9		130			
FINAL SAMPLE DISPOSITION	ood				0		Dispos	ed By						Date/Tir	ne			
DISTRIBUTION: Original- Sample	e Yellow	- Sampler														BC-(	000-828	(12/92)

CU 10440 94051

Westinghouse Hanfe Company	ord	-	CHAIN O	F CU	STOD	Y/SA	AMPL	E Al	NALY	SIS F	REQU	EST			Data Tu	1 maround	of <u>1</u>	000044
Collector			Company Cont	tact		_				Telepho						X Norma		6
Project Designation			PH BUTCHER Sampling Loca	tion						509-370 SAF No.								-
100-FR-3			100 t				. <u>-</u>			94-087								0
Ice Chest No. Ex-2			Field, Logbook	No. 1054	, .					Method	of Shipme	ent						
Shipped To ORTEK			Offsite Propert	y No. A J	33/m/4	W W	94-0	-0590	1-1		ding/Air l	Bill No.	14021	377	48			
Possible Sample Hazards/Remark			Preservative	HClpH<2														
			Type of Container	Gs														
			No. of Container(s)	1														
Special Handling and/or Storage COOL TO 4 DEGREES CENTIGRA	ADE O.	9°C recida	t Volume	40ml														
		Jab		HYDRA- ZINE														
SA	AMPLE ANA	ALYSIS																
AA04099																		
Sample No.	Matrix*	Date Sampled	Time Sampled															
BOBMSS	W	5/10/94	1000	X														
CHAIN OF POSSESSION			ign/Print Names				SPECIA	L INSTRU	CTIONS	1/		to	Du ty -	e Ed	15/99	4	Matrix *	•
Relinguished By Relinguished By  Relinguished By  Relinguished By  Relinguished By	Date/Tir	ne 1440 Receiv	ed By		Date/Tim	1440		gre	7 4	V	PO				ľ	SE	= Soil = Sedin	
h. Mara/K. Kapp	1/6/4	4 Ju	reeney how	eeney :	5/6/24		-		U					/		SL	= Solid = Sludg	10
Neurindrieues BA	Date/III	THO CON	ed by	,	Date/IIm	10	0	./	.0.4	1 - 11	0 040	twi	tul - 0	0K		o o	= Wate	r
Julency Dwee	ney 5/1	17/94	and Bu		D-t- /Fin		DCO	er g	00/	idal	.0 000		J			DS	= Air = Drum	Solids
Menindriened BA	Date/III	III KACAN	ed by		Date/ Him	18		U								T WI	= Drum = Tissu = Wipe	10
Relinquished By	Date/Tin	ne Receiv	ed By		Date/Tim	10										X V L	= Liquid = Veget = Other	d tation
LABORATORY Received By	1) 1		OTitle	~									<u>-</u> /	Date/Tir				
SECTION Storia,		tor	Samp	ele Re	ceivin	9							2/18/		1230			
FINAL SAMPLE DISPOSITION	od		-,-			0	Dispos	sed By						Date/Tir	ne			
DISTRIBUTION: Original- Sample	Yellow	- Sampler														BC-	5000-828	(12/92)

- 1 1 1 40 1 40 1 40 V

Westinghouse Hanfo Company	ord		CHAIN O	F CU	STOI	DY/S	AMPL	E AN	IALY	SIS F	REQU	EST			Data Tur	1 maround Priorty	of1	0000045
Collector			Company Cont	act						Telephor						X Normal		
Project Designation			PH BUTCHER Sampling Loca	tion						509-376 SAF No.	-4388					7		<del></del>
100-FR-3			OOF							94-087								0
Ice Chest No 7 - 71			Field Logbook							Method EMERY	of Shipme	ent						
Shipped To ORTEK			Offsite Propert	y No.	141	2213	>774	18 AS	is still	Bill of La	ding/Air E	Bill No.	140	213	774	8		
Possible Sample Hazards/Remark			Preservative	HCtpH<2														
			Type of Container	Gs														
			No. of Container(s)	1														
Special Handling and/or Storage COOL TO 4 DEGREES CENTIGRA	DE O.	9°C recid	Volume	40ml														
	at	las		HYDRA- ZINE														
SA	MPLE ANA	ALYSIS		ĺ														
2204100																		
Sample No.	Matrix*	Date Sampled	Time Sampled			1												
BOBMS9	U	5/10/94	1200	X						Ĭ								
()00/11/07	W	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1,200															
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				ļ			ļ			ļ								
CHAIN OF POSSESSION		!	ign/Print Namea				SPECIAL	LINSTRU	CTIONS					6 / /	194		Matrix	•
Relinquished By		ne (440 Receiv	red By		Date/Ti	me 1440	1 1	Sel	4V		Sta	2 di	ie (	0/10/	154	S SE	= Soil = Sedin	ment
12. Mars/K. Vapp Relinquished By	5/10/	194 Du	reenry Su	early	5/10	194	'		)	-					,	so	= Solid = Sludg	
Relinquished By	Date/Tin		ed By	- 1	Date/Ti	me			, ,	^ · ·	te a ac	T4121	111 -	nR		w	= Wate	
To mener Dage	My 5/	17/24					SCA	n of	ルル	Rad	<i>22) 0</i> (C	20 6	7			A	= Air = Drum	Solide
A Juneary L Sween	Date/Tin	ne Receiv	red By		Date/Ti	me '		2								DL T WI	= Drum = Tissu = Wipe	n Liquids
Relinquished By	Date/Tin	ne Receiv	red By		Date/Ti	me										X V	= Cidnic	d
LARORATORY Received By			Title											Date/Tin	ne			
LABORATORY Slove	Dort.	tu	Samol	Beck	uin	1							5/18	194	1230			
FINAL SAMPLE DISPOSITION	d		Jan Jan		0		Dispos	ed By						Date/Tin				

CICUPI 600001

														(	-U 7	URE	w y	140518
Westinghouse Hanf Company	ord	C	HAIN O	F CU	STOD	Y/S	AMPL	E AN	NALY	'SIS F	REQU	EST			Data Tu	1 maround		000046
Collector   T			Company Cont	tact						Telephor	ne No.					X Norma		0
Collector K. TIMPP			PH BUTCHER							509-376					"	<u>V</u>		2
,			Sampling Loca	tion						SAF No. 94-087								5
100-FR-3 ice Chest No. ———————————————————————————————————			Field Logbook	No							of Shipme	nt		-				
OC-4			Field Logbook	-1054						EMERY								
Shipped To			Offsite Propert		W94-	0 -	250	1-1		Bill of La	iding/Air B	ill No.	1/10	712	774	8		
ORTEK					VV-17	0		<del>7  </del>	_	-			190	213	1 4			
Possible Sample Hazards/Remark			Preservative	HClpH<														
		<del></del>	Type of Container	Gs						ļ								
			No. of Container(s)	1_1_			ļ		ļ	ļ								
Special Handling and/or Storage COOL TO 4 DEGREES CENTIGR	ADE C	1.9°C recid	Volume	40ml														
		atleb		HYDRA- ZINE									,					
S	AMPLE ANA	ALYSIS																
AAO4/01 Sample No.																		
Sample No.	Matrix*	Date Sampled	Time Sampled															
BOBMR3	W	5/11/94	1330	X												. ,		
				-						-								
				-			-		-									
				<del> </del>					<del> </del>	-								
CHAIN OF POSSESSION	<u> </u>	Sign	/Print Names				SPECIA	L IŅŞTRU	CTIONS				[		,	,	Matrix	
Relinquished By	Date/Tin		Rv	, .	Date/Time		-	//	1/11	1	h.L.	o Ol	110	6/1	5/94	/   <sub>s</sub>	= Soil	- 1
			Rogers	5119	y 143.	5	1 9	reg	4				nt	W/	0///	SE SO SL	= Sedir = Solid	
H. J. Many / K. Tlang	5/4/94 Date/Tin	1437 JOONS					_		)							SL	= Sludg	10
	Date/III	ne Received	By ()		Date/Time	O	0				,	4-	+	11		W	= Wate	·
TOUNE PROOF	-11-94		reeney LS	weene	7 5-11-	94	I Xa.	m.	for	rac	uo a	ello	dy -	OK		Ã	= Air	Calld-
Reliniquished By	Date/Tin		Ву	V Z Cr DX	Date/Time	•		1	)	rac			Ű			DS	= Drum	Solids Liquids
Deverer Sween	14 5/12	1511	V													T WI	= Tissu = Wipe	0
Relinquished By	Date/Tin		By		Date/Time		$\dashv$									L.	= Liquid	1
U			- •			-										[×	= Vege = Other	
														D			- 02.00	
LABORATORY Received By	1 1	,	) Title										-1	Date/Tin				
SECTION Sloria	Dotta	to	Samo	le Reci	evena								5/18	94	1230			
FINAL SAMPLE Disposal Metho	od /		J.		8		Dispos	ed By						Date/Tin	ne			
DISPOSITION																		

DISTRIBUTION: Original- Sample Yellow - Sampler

BC-6000-828 (12/92)

Westinghouse Hanfo	ord	C	CHAIN O	F CU	STODY	//S#	AMPL	E AN	NALY	SIS F	REQU	EST			Page _	naround	of <u>1</u>	_
Collector			Company Cont	act						Telephor						Priorty Norma		00000
100-FR-3			Sampling Loca							SAF No. 94-087 Method	of Shipme	nt		1.1.1.1				0
Shipped To ORTEK			Field Logbook  EF/-  Offsite Propert	y No. N	x4-0	-09	594 -	- /		Bill of La	ding/Air E	Bill No.	A-J5 3	140	213	774	48/	
Possible Sample Hazards/Remark	•		Preservative	HClpH<2						-								
			Type of Container No. of	Gs						ļ			-					
Special Handling and/or Storage		G 90 1 1	Container(s)	1									-					
COOL TO 4 DEGREES CENTIGES	ADE O.	at lob	1	40ml HYDRA- ZINE						-								
AAOHO2	MPLE ANA	ALYSIS																
Sample No.	Matrix*	Date Sampled	Time Sampled															
BOBMRT	W	5/11/94	1150	X														
																	Manain	
Relinguished By  Relinguished By  Relinguished By  Relinguished By  Relinguished By	Date/Tim  S/L(/0)  Date/Tim  Date/Tim  Date/Tim	<del></del>	By Welley By	5-1 1 Sux	Date/Time 1535 MM 5-1 Date/Time	35	SPECIAL	instruction of	tous for	rai	Dər	Le c	due ty-a	<b>. 6/1</b> 0 K	15/9/	S SE SO SL WO A DSL T WI L V X	Matrix*  = Soil  = Sedin  = Solid  = Sludg  = Wate  = Oil  = Air  = Drum  = Tissu  = Vege  = Vege  = Other	Solids Liquids
LABORATORY SECTION Slovia		ator	Somple	Recei	Mina								5/18	Date/Tin	1230	)		
FINAL SAMPLE DISPOSITION	d ,				8		Dispos	ed By						Date/Tim	ne			

															ان ا	tupla	04 40	40518
Westinghouse Hant Company	ford	(	CHAIN O	F CU	STOD	Y/S/	AMPL	E Al	NALY	SIS F	EQU	EST			Page Data Tu	1 maround	of <u>1</u>	
Collector 12 T 1001			Company Cont	tact						Telephor						Priorty X Norma		000048
Project Designation			Sampling Loca	tion						SAF No.	1500							0
100-FR-3			Field Logbook	No.						94-087 Method	of Shipme	int					<del></del>	-0-
Shipped To			Field Logbook	1054						EMERY	ding/Air E				(0)	,		
ORTEK			Offsite Propert	γ Νο.	W94-	0-0	2596	1-1		DIN OT LE	omg/Air c	)	402	137	748			
Possible Sample Hazards/Remar	ks		Preservative	HClpH<														
			Type of Container	Gs														
			No. of Container(s)	1														
Special Handling and/or Storage COOL TO 4 DEGREES CENTIGE	PADE O	9 pecid at	Volume	40mt														
		Lati		HYDRA- ZINE														
	AMPLE AN	ALVEIC		ZINE													i I	
	MAIL LE AN	ALTSIS																
AAD4103 Sample No.	Matrix*	Date Sampled	Time Sampled										1				11	
	- Indiana			·			T	l —	Τ	T			T					
BOBMSI	V	5/11/94	0930	<del>  X</del>	-					<del>                                     </del>			-	-				
		-			-				-				1					
20. Ž																		
CHAIN OF POSSESSION		Sig	n/Print Names			_	SPECIA	L INSTRU	CTIONS		$\bigcap$	/		2 (2)	1,019	//	Matrix 1	•
Relinquished By	Date/Ti	me Received	By O	5-11	Date/Time	35	9	Ke.	14	$\cup$	Do	ote	Chue ok	$\langle \varphi \rangle$	1317	7 s SE	= Soil = Sedin = Solid	
K-Unasp/K-Vapp	7/11/90 Date/Til	7 1435   1070 L	a pospul	3	Date/Time	22)	-	(	)				/,			SL	= Sludg = Wate	ge
Ralingulahed By  State - Deglets 5-	11-94 ,	520 1	V/		1520		1 Xaz	n Lu	11/2	adeo	acti	very.	-oK			OA	= Oil = Air	•
Religionulehed By	Date/Ti	me Decelve		weney	Date/Time	7 7	1000					0				DS DL	≃ Drum ≃ Drum	
Ducency LSwa	nu 51	12/54	V													T	≃ Tissu ≃ Wipe	16
Relinquished By	Date/Ti		1 Ву		Date/Time	•										L V X	= Liquid = Veges = Other	d itation
LABORATORY Received By SECTION	Out	·+	Title	· ·	`		1					3	5/18/9	Date/Tin				
Disposel Meth		t.n	Duriple	-Klee	may g		Dispos	ed By				-	113/7	Date/Tin	<i>1230</i> ne			
DISPOSITION					v		•	•										

Westinghouse Hanf	ord			- 011	0705		AAADI	<b></b>		OIO F	25011	FOT					of 1	
Company	0.0	(	CHAIN O	F CU	STOL	DY/SA	AMPL	E AN	IALY	SIS	KEQU	ESI			Data Tur	naround		01
Callage			10							Talanka	N-					Priorty		65000
Collector K Trapp GC	2 Ham	elter	Company Cont PH BUTCHER	act						Telephor						Nome	al .	
Project Designation			Sampling Loca	tion						SAF No.								<b>C</b>
00-FR-3 ce Chest No.			Field Logbook	No.						94-087 Method	of Shipme	ent						-
ce Chest No. ERZI										EMERY		211 81						
Shipped To RTEK 7			Offsite Propert	44.0	-059	14-1				Bill of La	1402	3ill No.	48					
Possible Sample Hazards/Remark			Preservative	HClpH<														
			Type of	Inc (pn \2	-	<del> </del>												
	· · · · · · · · · · · · · · · · · · ·		Container No. of	Gs	-	<del> </del>					-							
			Container(s)	1	1					ļ								
Special Handling and/or Storage COOL TO 4 DEGREES CENTIGE	ADE 3C	5/12/94 1430	Volume	40ml														
COOL TO 4 DEGREES CENTIGE.		AJS	. 1 .	HYDRA-												-		
	0.9	e Recid	rt Lub	ZINE														
SA	AMPLE AN	ALYSIS		1													]	
AAOHOU																		•••••
Sample No.	Matrix*	Date Sampled	Time Sampled					,		,	,				,		,	
303 mVI	ا را	5/12/94	1130	X	ļ						1							
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CHAIN OF POSSESSION		Sig	n/Print Names		<u> </u>		SPECIAL	INSTRU	CTIONS		7 1	,		/ /	-1- 1	,	Matrix '	)
Relinquished By	Date/Tir	ne Regeived	Ву Л		Date/Tir	ne	1	Ked	CIV	Y	15te	CIL	<i>le</i>	6/10	5/94	S	= Soil	
Ha buelte GCHamier	5/1	400 104	nE. Mae	45	-12-94	t.um	"	' X	1 -						,	SE	= Sedin = Solid	
Relinguished By	Date/Tir	ne Received	By A	J51-423	Date/Tir	me		U								W	= Sludg = Wate	
Horon T. Hoge 11	5-12-9	125 945	upson:	5/12/90	Date/Tir	130							,			O A	= Oil = Air	
Relinquished By	Date/Til	ne Received		/	Date/Tir		180	1	11/20	rdio o	retir	utit (	1K			DS	= Drum = Drum	Solids Liquids
Benjosov 5/17	194	1045					pea	X C	- C> > 00		,,,,	0				WI	= Tissu = Wipe	
Relinquished By	Date/Tir	ne Received	Ву		Date/Tir	ne	1									, r	= Liquid = Veget	tation
Received By			Title											Date/Tir	ne	^	= Other	
ABORATORY SECTION	Ditt	to	,	1. Po	cem	-							5/1	١ ـ ـ ا	230			
FINAL SAMPLE Disposal Metho	od .		J-M		CEM	7	Dispos	ed By						Date/Tir				

Westinghouse Hanf Company	ord	C	HAIN O	F CU	STO	DY/S	AMPI	LE AI	NALY	SIS F	REQU	EST					of <u>1</u>	050000
															_	maround Priorty		Ö
Collector K. Trach			Company Con	tact						Telepho					1 [	X Norma	اد	Ö
Project Designation			Sampling Loca	tion						SAF No.								
100-FR-3			100 F							94-087								
Ice Chest No. ER-21			Field Logbook							Method	of Shipme	ent						
Shipped To			Offsite Propert	ne bla			11				nding/Air l	Bill No.	(1/42)	1/72	21/0			
ORTEK				W	144-	0-0	594	~ 1					402	151	748		T	
Possible Sample Hazards/Remark	K8		Preservative	HClpH<	2									<u> </u>				
			Type of Container															
			No. of	Gs	<b>†</b>	1		1		<del>                                     </del>								
Special Handling and/or Storage			Container(s)	1	<del> </del>		-		<del> </del>	<del> </del>	<del></del>							
COOL TO 4 DEGREES CENTIGE	ADE O.	goc recid	Volume	40ml														
	4	at lub		HYDRA- ZINE														
S	AMPLE AN	ALYSIS			1													
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DISTRIBUTION: Original- Sample	e Yellow	- Sampier														BC-6	5000-828	(12/92)

## **END OF PACKAGE**